

Professional Series Network Thermostat Configuration Guide

(NT100e/h, NT120e/h, NT130e/h, NT150e/h, and NT160)

Release 3.0

Inside ...

- Configuring the thermostat using the TDI
- Configuring the thermostat using the TMI
- Troubleshooting



P R O L I N X

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August 2007

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FCC

Model: NT10e/NT20e, NT100e/h, NT120e/h, NT130e/h, NT150e/h, NT160e/h, TM220e/h, and TM250e/h
Made in the USA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CSA

Power: 24VAC 45mA 60Hz
48VDC 22mA 60Hz
Switched power each contact: 24VAC 2A 60Hz



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Preface

The *Professional Series Network Thermostat Configuration Guide* describes how to control and configure Proliphix devices (for example, thermostats) through either the Thermostat Device Interface (TDI) or more specifically through the browser-based Thermostat Management Interface (TMI).

Audience

This guide is intended for managers and/or facilities managers or those responsible for managing multiple devices remotely in small or medium size buildings, multiple buildings, or corporate environments.

As a reader of this guide, you should be familiar with the use of an Internet browser (for example Internet Explorer or Mozilla Firefox) and have a working knowledge of general data networking principles. You should have prior experience with establishing a local area network (LAN) in either a home or office. You should understand the basic principles of connecting patch panels and switches as well as configuring features on a firewall router.

Be sure to read the *Software Release Notes* (SRN) on our web site for this product. The SRN contains the most current product information and requirements.

Documentation Reading Path

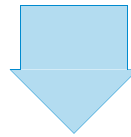
The following is the recommended documentation reading path for installing and configuring Proliphix devices. For a detailed description of each guide, see [Proliphix Documentation Library \(page xiii\)](#).

1

Installing the Thermostat

Proliphix Thermostat Installation Guide

*Proliphix Ethernet Power Adapter Installation Guide
(Refer to this manual only if you are installing an
EPA-20 or EPA-60 Ethernet Power Adapter.)*



2

Connecting to the Local Network

Professional Series Network Thermostat Configuration Guide



3

Accessing the Thermostat Remotely Using the Proliphix Remote Management Server

Proliphix Remote Management Setup Guide

Proliphix Documentation Library

The following documentation is available for Proliphix products. *Software Release Notes* ship with each product. For ordering information, see [page xv](#).

Proliphix Product	Title	Audience
NT10e, NT20e, NT100e/h, NT120e/h, NT130e/h, NT150e/h, and NT160e/h	<i>Proliphix Thermostat Installation Guide</i>	For customers who want to install the Basic and Professional series thermostat.
EPA 20 and EPA 60	<i>Proliphix Ethernet Power Adapter Installation Guide</i>	For customers who want to install the EPA-20 or EPA-60 Ethernet Power Adapter.
NT100e/h, NT120e/h, and NT130e/h	<i>Proliphix Remote Management Setup Guide</i>	For customers who want to manage the thermostat using the Proliphix Remote Management Server.
NT10e, NT20e, NT100e/h, NT120e/h, NT130e/h, NT150e/h, and NT160e/h	<i>Proliphix Remote Management User Guide</i>	For customers who own either the Basic series or Professional series thermostat and want to remotely manage their thermostats through secure authentication at the Proliphix web site.
TM220e/h and TM250e/h	<i>Thermal Managment Series Network Thermostat Configuration Guide (TM220e/h and TM250e/h)</i>	For customer who want to access and control their Proliphix Thermal Management series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT100e/h, NT120e/h, NT130e/h, NT150e/h, and NT160e/h	<i>Professional Series Network Thermostat Configuration Guide (NT100e/h, NT120e/h, NT130e/h, NT150e/h, and NT160e/h)</i>	For customer who want to access and control their Proliphix Professional series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT10e and NT20e	<i>Basic Series Network Thermostat Configuration Guide (NT10e and NT20e)</i>	For customer who want to access and control their Proliphix Basic series thermostat through either the Thermostat Device Interface or more specifically through the browser-based Thermostat Management Interface (TMI).
NT10e, NT20e, NT100e/h, NT120e/h, NT130e/h, NT150e/h, NT160e/h TM220e/h, and TM250e/h	<i>Proliphix Device Management Software User's Guide</i>	For customer who want to manage their Proliphix devices (for example, thermostats) remotely using the PDMS.

Conventions

This guide uses the following conventions, when applicable:

Description	Convention and Example
Commands or keywords, file or path names	Boldface font
Variable parameters for which you supply values	<i><courier italics></i>
Options and arguments for which you supply values	[]
Information that the user must enter	Courier Bold font
Screen messages or system output	Courier Regular font
Selecting a menu item	Menu => Option
Book titles, new terms, and emphasized text	<i>Italics</i>



Note

Additional information that may apply to the subject text.



Caution

Proceed carefully to avoid possible equipment damage or data loss.



Warning

Proceed carefully to avoid possible personal injury.



Tip

Provide helpful suggestions.

Technical Publications

Customers can obtain product documentation on our web site at <http://www.proliphix.com/Documenation.aspx>.

**Note**

Documentation is available for currently supported product releases. Documentation is available in Adobe PDF format. You can view PDFs online using the Adobe Reader ® 6.0 or later. To download the latest version of the Adobe Reader software from the Adobe web site, click <http://www.adobe.com/products/acrobat/readstep2.html>.

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- Product model and serial number
- Type of heating/cooling system (for example, gas, oil, or electric; warm air, hot water, heat pump, steam or gravity)
- Location and number of wires attached to the Proliphix thermostat

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Overview

The Proliphix Professional Series Network Thermostats are powered by either Proliphix Network Power, Power over Ethernet, or via 24Vac from the HVAC system. The Professional Series of thermostats include the following:

Thermostat Model	Humidity Sensing and Control	Two Remote Thermal Sensors
NT160e/h	✓	✓
NT150e/h	✓	✓
NT130e/h		✓
NT120e/h		✓
NT100e/h ^a		

^a The NT100e/h is a cost-effective Professional Series Network Thermostat without either humidity sensing and control or support for two remote thermal sensors.

The Professional Series Thermostats should be installed by authorized Proliphix Dealers/Installers. Authorized Proliphix Installers should consult the *Proliphix Remote Management Setup Guide* to learn how to properly administer and configure client thermostats for Remote Management.

The end-user of the Professional Series Thermostats should consult the *Proliphix Remote Management Setup Guide* for a complete explanation of remotely managing your Network Thermostat.

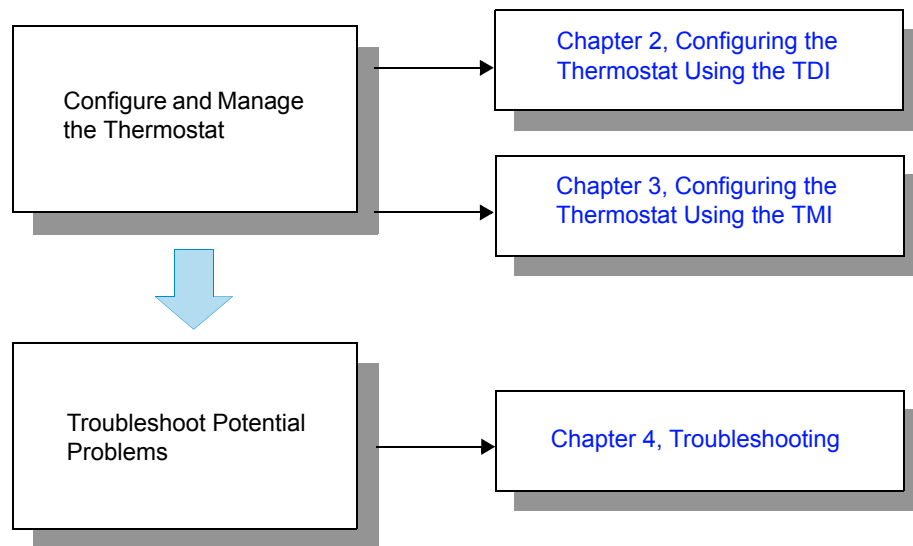
You can configure and manage your thermostat using either the Proliphix Thermostat Management Interface (TMI) or the Thermostat Device Interface (TDI).

Thermostat Management Interface — The Proliphix TMI enables you to manage and control your Proliphix thermostats through your web browser.

Thermostat Device Interface — The buttons on the front of the thermostat enable you to modify the temperature, enable basic HVAC functions, and to view the thermostat's network configuration and status.

Use the instructions in this guide to configure and manage your thermostat as shown in [Figure 1-1](#).

Figure 1-1 Thermostat Configuration Process Flow



Before You Begin

Before you access and control your Proliphix Network Thermostat through either the TDI or more comprehensively through the browser-based TMI, you must know the IP address and port number of the local thermostat and enable the real time clock. The following sections describe these pre-requisite tasks.

IP Address and Port Number

Your Proliphix Network Thermostat ships from the factory capable to support the DHCP mode for assigning an IP address to your thermostat. See the [DHCP Assigned IP Addresses \(page 3-2\)](#) for more information. You must know the IP address and port number for your thermostat and enter this information in your web browser.

Logging In to the Thermostat

To retrieve the IP address and port number using the Thermostat Device Interface (buttons and control on the front of the thermostat):

- 1 From the [Status & Control Screen \(page 2-10\)](#), select the [Network Status Screen \(page 2-15\)](#) and record the IP address and port number.
- 2 Enter this IP address and port number (address:port_number) as the URL in your web browser.
- 3 Log in to the thermostat as the Administrator as follows:
Username: **admin**
Password: **admin** (default)
- 4 Access the [Network Settings Page \(page 3-30\)](#) in the Thermostat Management Interface.
- 5 Disable the **DHCP function** by selecting **Static** for the IP address method.
- 6 Enter a unique IP address, Subnet Mask, Gateway, and HTTP port number.
- 7 Click **Submit**.

Real Time Clock

Your Proliphix Network Thermostat ships from the factory with the real time clock **disabled** to ensure longer battery life. You **must** enable the real time clock to provide years of accurate timekeeping on your thermostat.

To enable the real time clock:

- 1 On the [General Settings Page \(page 3-14\)](#), check the **Set Thermostat Time** check box in the **Set Date and Time** field.
- 2 Click **Submit**.

What's Next?

Continue with [Chapter 2, Configuring the Thermostat Using the TDI](#) or [Chapter 3, Configuring the Thermostat Using the TMI](#) to manage your thermostat.

Configuring the Thermostat Using the TDI

This chapter describes how to manually modify certain parameters directly at the thermostat using the Thermostat Device Interface (TDI) (buttons and screen options on the thermostat). The thermostat's front panel includes up and down arrows and several buttons located at the bottom of the LCD to select the desired configuration settings.

Thermostat Buttons and LCD Screen Options

This section describes the thermostat's buttons and LCD screen options. [Figure 2-1](#) shows the basic layout of all thermostat buttons and a typical LCD screen.

Figure 2-1 Thermostat Buttons and LCD Options

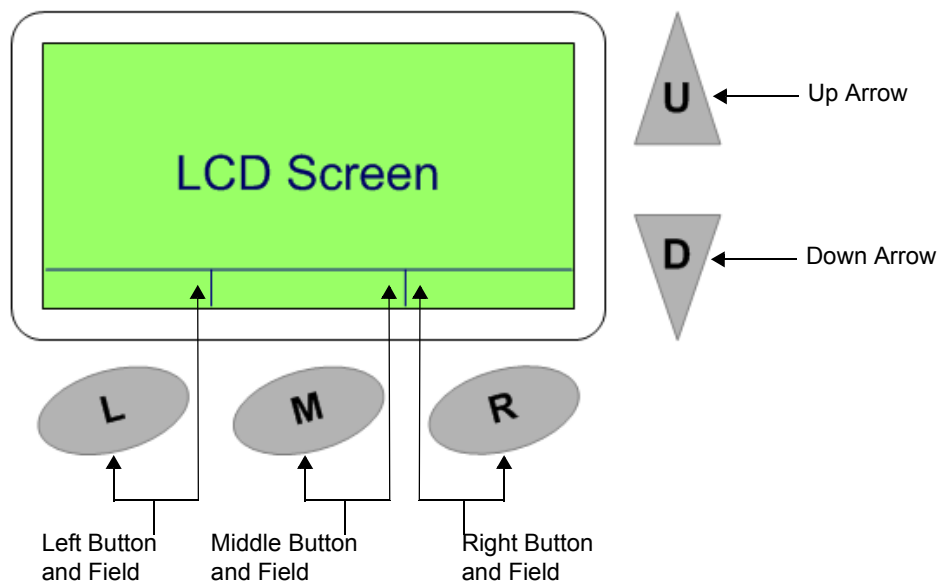


Table 2-1 describes the thermostat buttons and LCD options.

Table 2-1 Thermostat Buttons and LCD Options

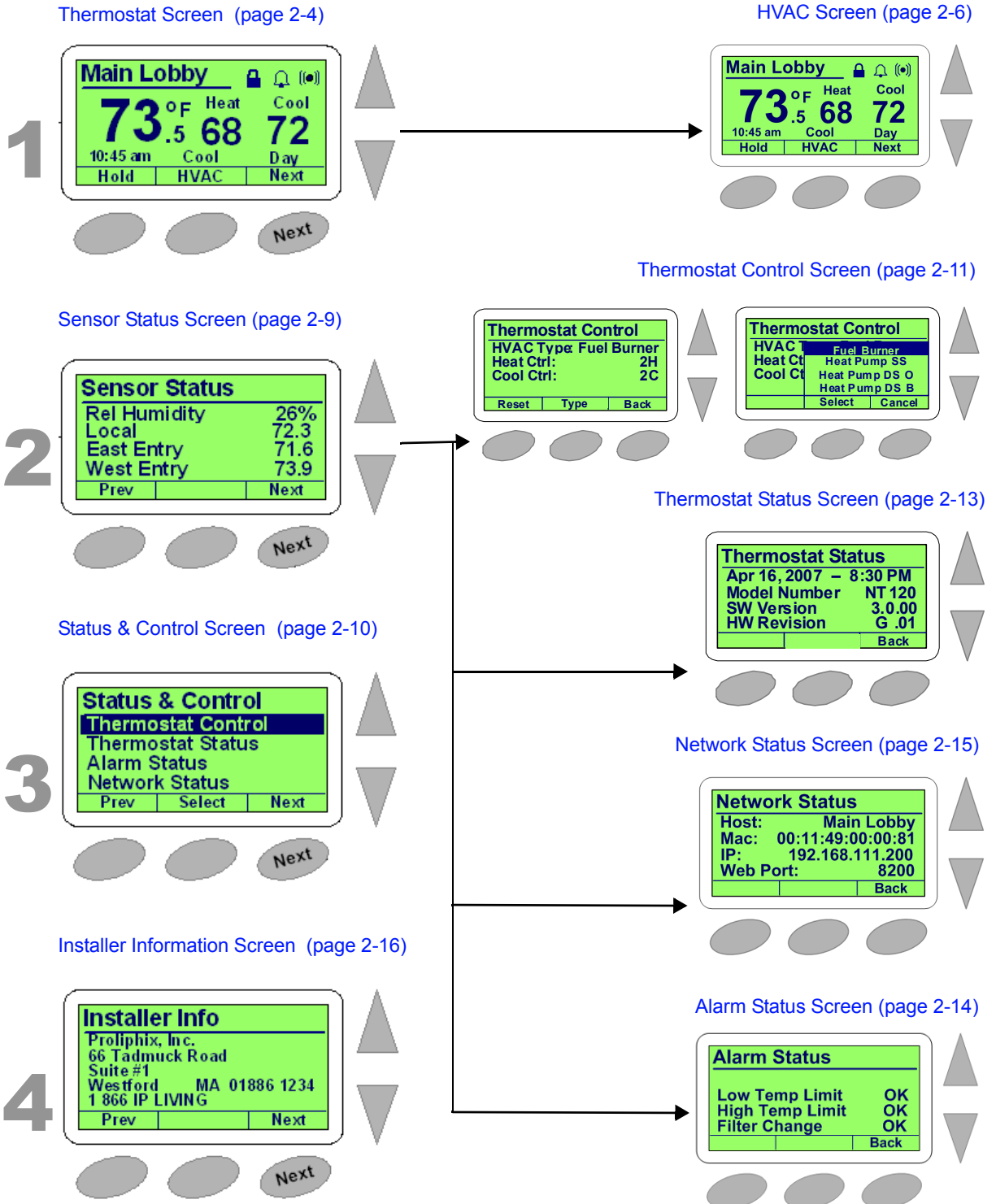
Button or LCD Option	Description
Up arrow (multiple uses, screen sensitive)	Increases the setpoint temperature settings. Scrolls up one field in multi-field screens.
Down arrow (multiple uses, screen sensitive)	Decreases the setpoint temperature settings. Scrolls down one field in multi-field screens.
Left button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Middle button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Right button (multiple uses, screen sensitive)	Selects the function displayed on the LCD.
Left button field	Displays the function to be controlled by the left button. In many screens, this field is labeled Prev and enables you to access the previous screen.
Middle button field	Displays the function to be controlled by the middle button. In many secondary screens, this field is labeled Select and enables you to select the highlighted field on the screen.
Right button field	Displays the function to be controlled by the right button. In many screens, this field is labeled Next and enables you to access the next screen.

Each thermostat displays content on the LCD screen. The LCD screen is organized into primary and secondary (or sub) screens. Most of the Professional Series thermostats have four primary screens. However, the NT100e/h has three primary screens. This section describes the primary and secondary screens shown in [Figure 2-2 on page 2-3](#).

Figure 2-2 Primary and Secondary Thermostat Screens

Primary Screens

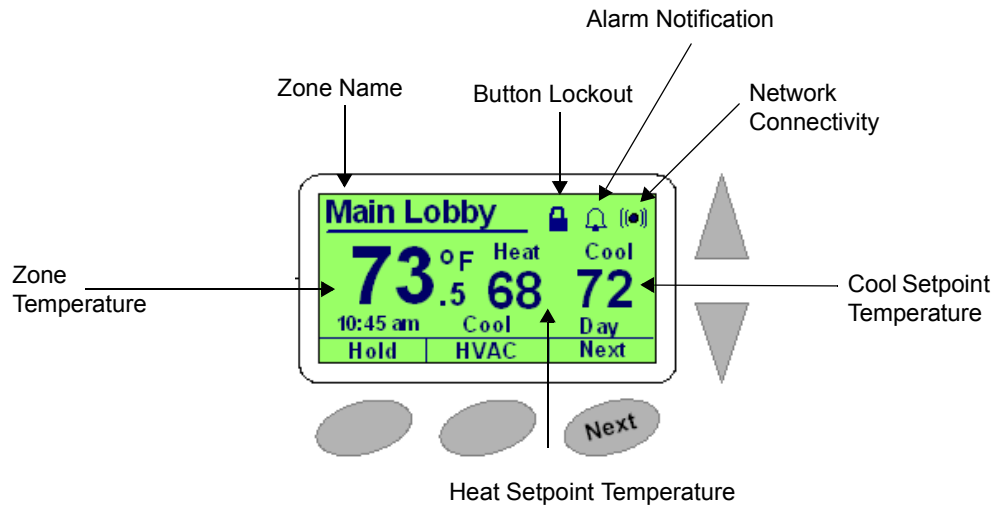
Secondary Screens



Thermostat Screen

Figure 2-3 shows the default **Thermostat** screen. The thermostat constantly displays this screen with a minimal ambient backlight. The backlight intensifies after you click any button.

Figure 2-3 Thermostat (Default) Screen



Note

The thermostat display reverts back to the default LCD screen after 16 seconds of keypad inactivity.

Table 2-2 lists the thermostat LCD screen options.

Table 2-2 Thermostat Screen Options

Field	Description
Zone Name (network host name)	Initially, the Zone Name is set to the last six digits of the network MAC address (e.g. 00-00-6A).
Button Lockout	When visible, indicates that some or all of the thermostat buttons are disabled from controlling the thermostat.
Alarm Indication	When visible, indicates that an alarm condition exists within the thermostat. Alarm conditions include Low and High Temperature and Filter Change notifications.
Network Connectivity	When visible, indicates that the thermostat is connected to an Ethernet network. When blinking, indicates an active Ethernet network (network activity).
Zone Temperature	Indicates the current zone temperature in degrees Fahrenheit or Celsius. If remote sensors are installed, enabled, and configured to average with the local thermostat sensor, this field indicates the average temperature of the aggregate sensors.

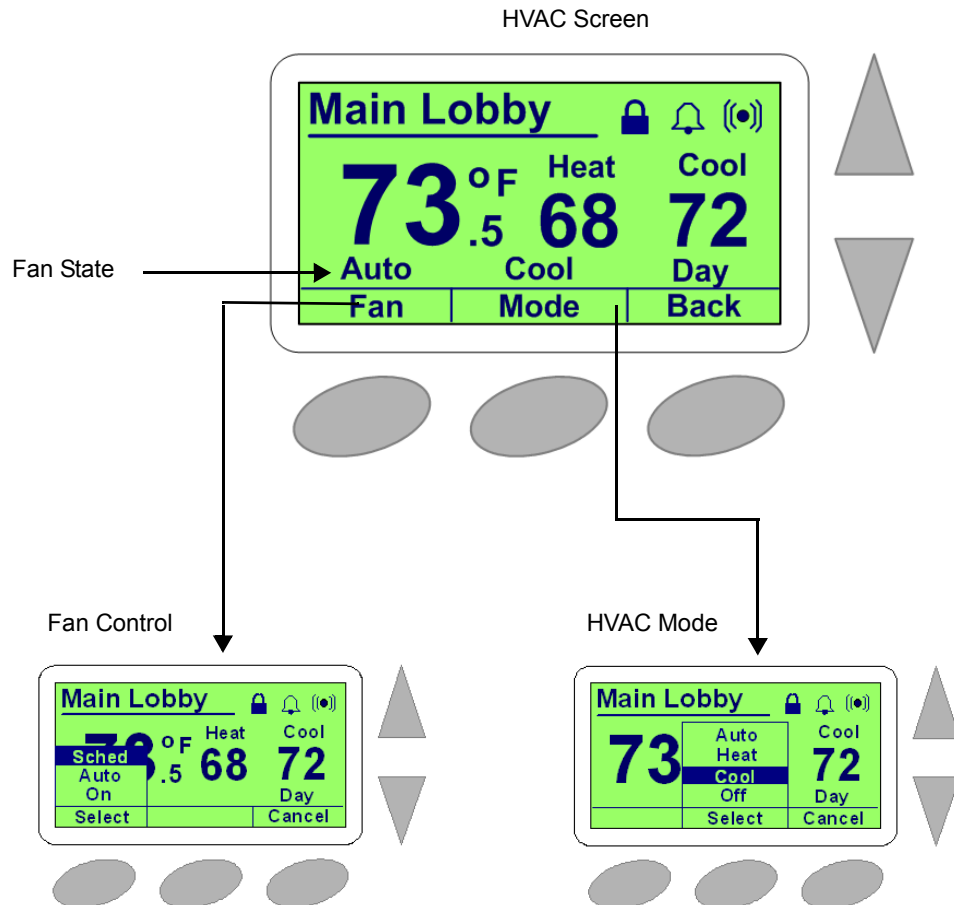
Table 2-2 Thermostat Screen Options (Continued)

Field	Description
Heat Setpoint Temperature	Indicates the current heat setpoint temperature (°F or °C) as defined by the thermostat schedule. <i>Note: This field is disabled if only Cool is selected in HVAC mode. This field is not be visible if the thermostat is configured as a cool-only thermostat.</i>
Cool Setpoint Temperature	Indicates the current cool setpoint temperature (°F or °C) as defined by the thermostat schedule. <i>Note: This field is disabled if only Heat is selected in HVAC mode. This field is not be visible if the thermostat is configured as a heat-only thermostat.</i>
Time	Time of day displayed in Daylight Savings Time if chosen.
Temperature Hold	Holds current temperature either permanently or for 1, 3, 8, 12, or 24 hours or until after you manually remove the Hold, after which the temperature settings “Return” to that set in the schedule. The Hold button toggles between Hold and Return. (See Advanced Settings Page on page 3-35)
One Button Override (OBO) (NT130e/h and NT160e/h only)	When Button Lockout is enabled, this button allows you to set the thermostat to the Class #1 Day Period heat and cool setting as defined in the Setback schedule. The amount of time that the One Button Override is in effect is determined by the setting of the Hold/OBO duration on the Advanced Settings page.
HVAC Activity	Displays the current state of the HVAC system. For either Fuel Burner or Heat Pump, the LCD displays the following: ■ Delay – Compressor delay is active (Heat Pump and Fuel Burner A/C) ■ Heat – Single stage heat is active. ■ Heat2 – Second stage heat is active. ■ Aux Ht – Auxiliary heat is active (Heat Pump). ■ Cool – Single stage cooling is active. ■ Cool2 – Second stage cooling is active.
HVAC Mode Control	Enables the HVAC screen whereby HVAC and Fan settings can be modified (see Figure 2-4).
Next	Enables display of the next thermostat screen.
Period State	Displays the current scheduled Period. The four schedule Periods are <i>Morn</i> , <i>Day</i> , <i>Eve(ning)</i> and <i>Night</i> .

HVAC Screen

The **HVAC** screen is a sub-screen of the default [Thermostat \(Default\) Screen](#) (page 2-4). Most of the content on the **HVAC** screen is identical to the **Thermostat** screen with the exception of the HVAC mode and fan setting controls.

Figure 2-4 HVAC Screen, Fan Setting, and HVAC Mode Example



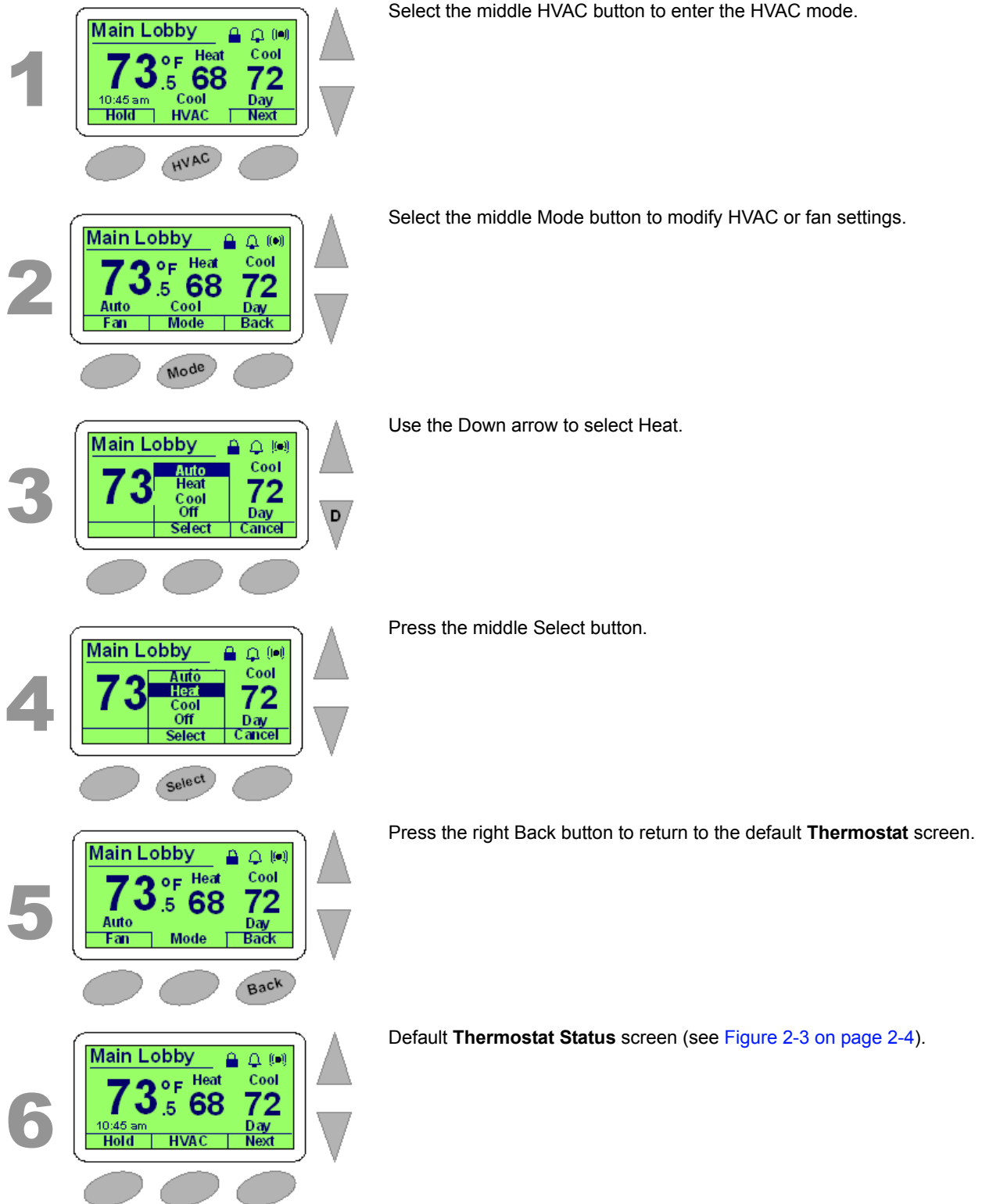
Use [Table 2-3](#) to configure the HVAC options.

Table 2-3 HVAC Screen Options

Field	Description
Fan State	Displays the current state of the fan. Options include: ■ Sched – The fan schedule feature is enabled for each period of each Day Class. (See Occupied, Unoccupied, Other Class Schedule Pages (page 3-22).) ■ Auto – The fan is controlled by either the heat or AC systems (or both). ■ On – Forces the fan to the on state independent of the heat or AC systems.
Fan Control	Displays the options for changing the state of the fan. See Fan State.
HVAC Mode	Displays the options for changing the state of the HVAC System. ■ Auto – Automatic changeover between the heat or A/C systems. ■ Heat – Enables the heating system only. The A/C system is disabled. ■ Cool – Enables the A/C system only. The heating system is disabled. ■ Off – Disables the heating and A/C systems.
Back	Returns to the default Thermostat screen.
Cancel	Clears the current active menu.

Figure 2-5 shows an example of the process of changing HVAC settings at the thermostat.

Figure 2-5 Changing the HVAC Setting



Sensor Status Screen

The **Sensor Status** screen is a secondary screen on the NT120e/h, NT130e/h, NT150e/h, and NT160e/h models (if remote sensors are installed and enabled) and the second primary screen if remote sensors are disabled.



Note

The NT100e/h does not support external thermal sensors, therefore this screen is not available on the NT100e/h Network Thermostat.

Figure 2-6 NT120e/h and NT130e/h Sensor Status Screens

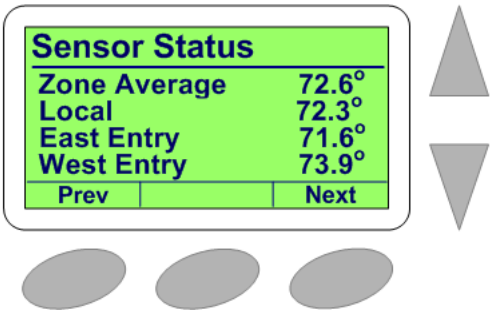


Figure 2-7 NT150e/h and NT160e/h Sensor Status Screens

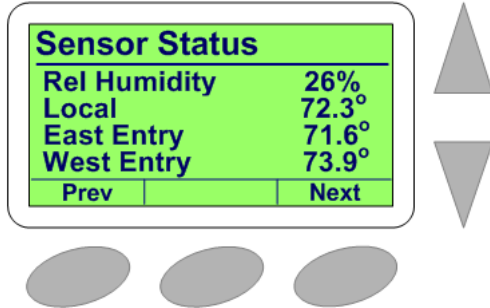


Table 2-4 lists the sensor status screen display options.

Table 2-4 Sensor Status Screen Options

Field	Displays
Zone Average	Average temperature of any combination of Local, Remote Sensor #1 (e.g. East Entry), and Remote Sensor #2 (e.g. West Entry).
Rel Humidity (NT150e/h and NT160e/h only)	Percentage of relative humidity as sensed internal to the thermostat.
Local	Current temperature of the sensor within the thermostat.
East Entry (e.g. RS #1)	Current temperature of Remote Sensor #1.
West Entry (e.g. RS #2)	Current temperature of Remote Sensor #2.

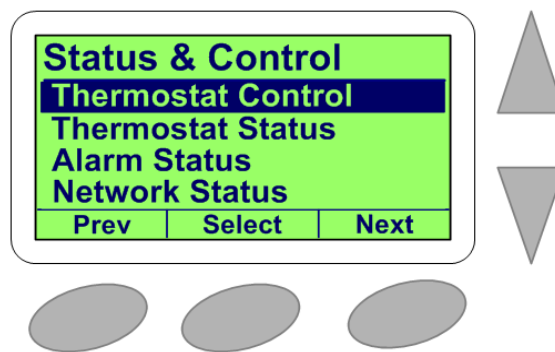
Status & Control Screen

The **Status & Control** screen is the third primary screen. (This is the second primary screen on the Professional Series thermostats if remote sensors are disabled.) You can highlight each status field by pressing the Up or Down arrows on the thermostat. Press **Select** to choose the desired status field.

You can access the following four secondary screens from the **Status & Control** screen:

- [Thermostat Control Screen \(page 2-11\)](#)
- [Thermostat Status Screen \(page 2-13\)](#)
- [Alarm Status Screen \(page 2-14\)](#)
- [Network Status Screen \(page 2-15\)](#)

Figure 2-8 Status & Control Screen



[Table 2-5](#) lists the **Status & Control** screen options.

Table 2-5 Status & Control Screen Options

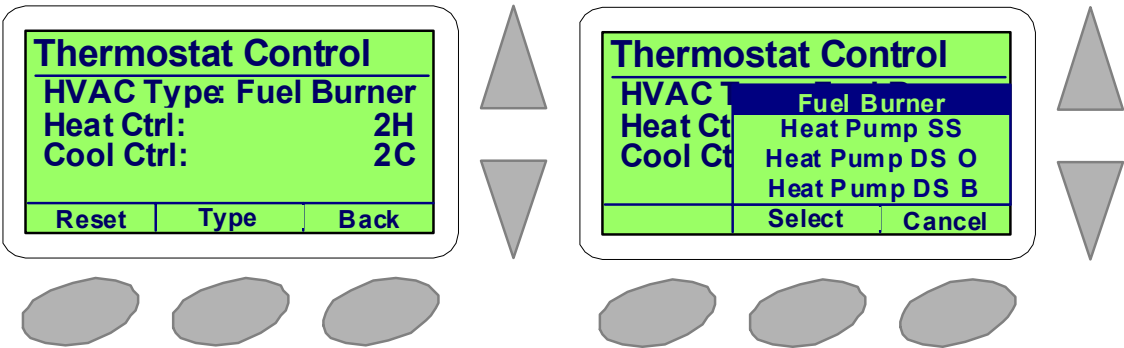
Option	Description
Thermostat Control	When highlighted and selected, opens the Thermostat Control Screen (page 2-11) .
Thermostat Status	When highlighted and selected, opens the Thermostat Status Screen (page 2-13) .
Alarm Status	When highlighted and selected, opens the NT150e/h and NT160e/h Alarm Status Screen (page 2-14) .
Network Status	When highlighted and selected, opens the Network Status Screen (page 2-15) .

Thermostat Control Screen

The **Thermostat Control** screen is a sub-screen of the [Status & Control Screen \(page 2-10\)](#). You can select the HVAC system type on this screen. This screen also displays the status of the selected type along with the default settings.

To change specific parameters for each type, go to the [Advanced Settings Page \(page 3-35\)](#). To initiate a software reset, press the left button and see [Resetting the Thermostat \(page 4-1\)](#).

Figure 2-9 Thermostat Control Screen



Use [Table 2-6](#) to configure the **Thermostat Status** screen options.

Table 2-6 Thermostat Status Screen Options

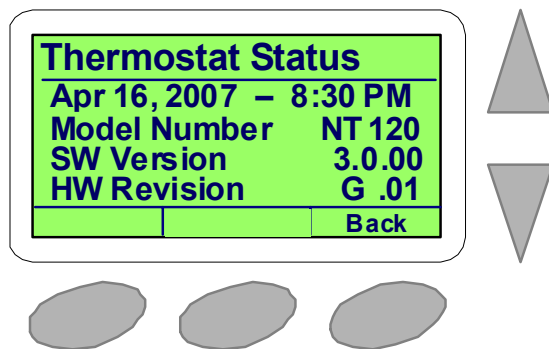
Field	Description
Reset	Press and hold the Reset button for three (3) seconds to perform a software reboot.
Type	Select either Fuel Burner (default) or Heat Pump. When selecting between either Fuel Burner or Heat Pump or between Heat Pump and Fuel Burner, the HVAC Mode must be set to OFF prior to selecting the opposite setting. (See Changing the HVAC Setting (page 2-8) or Status & Control Page (page 3-9)). ■ Fuel Burner – Fossil fuel systems which includes oil or gas-fired boilers or furnaces. ■ Heat Pump SS – Electric heat pump (Single Stage) HVAC system type. ■ Heat Pump DS O – Electric heat pump (Dual Stage O Rvs. Valve) HVAC system type. ■ Heat Pump DS B – Electric heat pump (Dual Stage B Rvs. Valve) HVAC system type.
See the Advanced Settings Page (page 3-35) further explanation of the following parameters.	
HVAC Type	Displays the selected HVAC system type; Fuel Burner or Heat Pump. Fuel Burner: <i>Heat Ctrl:</i> ■ Disable – No heating system is present. ■ 2H – Dual Stage heating is enabled. ■ 1H – Single Stage heating is enabled. <i>Cool Ctrl:</i> ■ Disable – No cooling system is present. ■ 2C – Dual Stage cooling is enabled. ■ 1C – Single Stage cooling is enabled. Heat Pump: <i>Heat Ctrl:</i> ■ Disable – No heating system is present (i.e. air conditioning only) ■ 2H – Dual Stage heating is enabled. ■ 1H – Single Stage heating is enabled. ■ Aux Heat – Auxiliary heat is enabled to augment the heat pump. <i>Cool Ctrl:</i> ■ Disable – No cooling system is present (i.e. heat only) ■ 2C – Dual Stage cooling is enabled. ■ 1C – Single Stage cooling is enabled.

Thermostat Status Screen

The **Thermostat Status** screen is a sub-screen of the [Status & Control Screen](#) (page 2-10). This screen displays the following information for each thermostat:

- Current date
- Product model number
- Software version
- Hardware revision

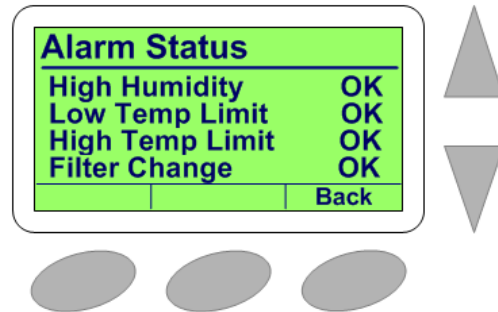
Figure 2-10 Thermostat Status Screen



Alarm Status Screen

The **Alarm Status** screen is a sub-screen of the [Status & Control Screen \(page 2-10\)](#). This screen displays the status of both the Low and High Temperature Limits alarm and the Filter Reminder alert.

Figure 2-11 NT150e/h and NT160e/h Alarm Status Screen



[Table 2-7](#) lists the **Alarm Status** screen display options.

Table 2-7 Alarm Status Screen Options

Field	Displays
High Humidity (NT150e/h and NT160e/h only)	Relative Humidity above which an alarm indication is set by the thermostat. ■ OK – Relative Humidity has not dropped below the value set as the High Humidity. ■ Not OK – Relative Humidity has dropped below the value set as the High Humidity.
Low Temp Limit	Temperature below which an alarm indication is set by the thermostat. ■ OK – Temperature of thermostat has not dropped below the value set as the Low Temperature Limit. ■ Not OK – Temperature of thermostat has dropped below the value set as the Low Temperature Limit.
High Temp Limit	Temperature above which an alarm indication is set by the thermostat. ■ OK – Temperature of thermostat has not risen above the value set as the High Temperature Limit. ■ Not OK – Temperature of thermostat has risen above the value set as the High Temperature Limit.
Filter Change Alert	Indicates that the HVAC system requires service or the air handler filter needs cleaning or replacement. ■ OK – Maintenance is not required. ■ Now – Maintenance is required.

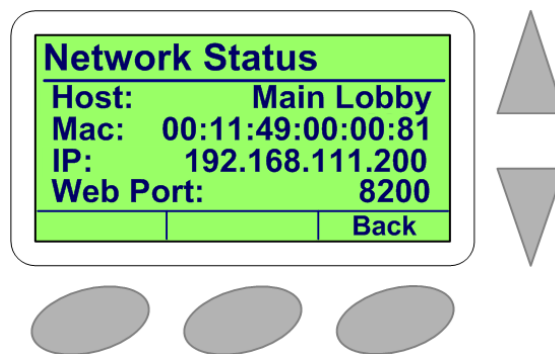
Network Status Screen

The **Network Status** is a sub-screen of the [Status & Control Screen \(page 2-10\)](#). This screen displays the following information:

- Thermostat host name
- Unique Ethernet Media Access Control (MAC) address
- Internet Protocol (IP) address
- Web port number

See [Network Settings Page \(page 3-30\)](#) for more information on setting these parameters.

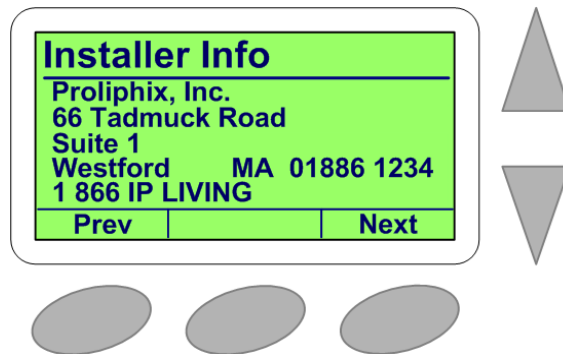
Figure 2-12 Network Status Screen



Installer Information Screen

The **Installer Information** screen is the fourth primary screen.

Figure 2-13 Installer Information Screen



[Table 2-8](#) lists the **Installer Information** screen options.

Table 2-8 Installer Information Screen Options

Field	Displays
Company Name	Installer company name.
Company Address #1, #2	Installer address fields.
Company City, State/Province, Zip/Postal Code	Installer city, state/province and zip/postal code fields.
Company Telephone	Installer telephone number.

Configuring the Thermostat Using the TMI

This chapter describes how to connect the thermostat to your local network and configure and monitor the thermostat through the web browser using the Thermostat Management Interface (TMI).

Thermostat Management Interface (TMI) Authentication

The TMI for all Professional Series thermostats requires password authentication prior to accessing the HTML pages that enable you to control or manage the thermostats. There are two levels of authentication allowed to manage the Professional Series thermostats; the Administrator account has the highest level of privileges and the User account has the lowest level of account privileges. The username and password for each account is as follows:

Administrator Account

Username: **admin**

Password: **admin** (default)

User Account

Username: **user**

Password: **admin** (default)



Tip

You can change each of these passwords within each account after the initial authentication. For more information, see [Password Settings Page \(page 3-56\)](#).

DHCP Assigned IP Addresses

The Professional Series thermostats ship directly from the factory enabled to perform as a Dynamic Host Configuration Protocol (DHCP) client. DHCP is an established standard used to assign IP addresses automatically after each network device is inserted into the network or when the device experiences a power cycle. DHCP allows devices on your local network to receive their Internet Protocol (IP) addresses automatically from an attached DHCP server typically located within a local router. Devices located on the same network as the router may include DHCP client software. This software works in conjunction with the router's DHCP Server to request and receive both an IP address and Gateway Address.

If your file server or router supports DHCP, then your Proliphix thermostat automatically retrieves an IP Address, Gateway Address, and Subnet Mask from the DHCP server on your network.



Note

Proliphix strongly recommends that a DHCP server be installed and operational in your network prior to installing the thermostat.

If a DHCP server is unavailable on your network, your thermostat will default to the 169.254.111.111 IP address within 60 seconds once you press the "abort" key on the Network Status screen on the TDI. Note that this address is not unique to your network if more than one thermostat is installed on a network without a DHCP server. That is, there will be multiple thermostats on the network with the same IP address (i.e. 169.254.111.111). Addressing conflicts will exist and most of the thermostats will be inaccessible.

Before you Begin

Before you access the TMI to control and manage your thermostat, complete the following prerequisite tasks described in this section:

- Connect the thermostat to the network.
- Obtain the device name, default host name, IP address, and Web Port identifier.
- Establish the thermostat's identity for remote management.

Connecting the Thermostat to the Local Network

This section describes how to connect your Professional Series thermostat to your local data network. This connection enables you to conveniently and efficiently configure your thermostat using a browser on your laptop or desktop personal computer. If a broadband connection is available on your local network, you can also remotely manage and configure your thermostat via the Internet.

To connect the thermostat to your local network:

- 1 Using a standard patch cable, complete the connection of your thermostat(s) to the local switch or router. Your thermostat(s) should automatically communicate with the local DHCP server and be assigned a unique IP address.
- 2 Go to the physical location of each thermostat and record the following information using the worksheet below. Use a separate piece of paper if necessary.

Information	Thermostat 1	Thermostat 2	Thermostat 3
Device Name (Zone Name) of the thermostat			
Located in the upper-left corner of the Thermostat (Default) Screen (page 2-4) .			
Default host name of the thermostat			
The last six digits of the Proliphix-assigned device MAC address in the format “AB:CD:EF”. See Network Status Screen (page 2-15) .			
IP Address and Web Port identifier			
Select the Network Status Screen (page 2-15) under the Status & Control Screen (page 2-10) .			



Tip

You will refer to this information later in this guide when you configure your thermostat(s) for Remote Management. Keep this information as a reference in case you need to change your thermostat(s) network settings.

Remote Management

You can manage the Professional Series thermostat using a web browser on a local area network (LAN) or remotely through the Internet after proper authentication at the Proliphix Web Site (www.proliphix.com).



Note

*If you use a VPN to access your thermostats remotely, the thermostats appear to reside on the “local” network. In this case, you do not need to control the thermostats through the Proliphix Remote Management Service via the Proliphix Web Site. If the Proliphix Remote Management Service is not used however, email notification due to alarm conditions is **not** available.*

Logging In to the Thermostat

To establish the identity of the thermostat for Remote Management capability:
(See the *Proliphix Installer Remote Management Guide* and the *Proliphix Remote Management User Guide* for detailed information.)

- 1 Log in to the TMI as the Administrator as follows:
Username: **admin**
Password: **admin** (default)
- 2 Access the [General Settings Page \(page 3-14\)](#) through the TMI.
- 3 Enter a **Device Name** and **Site Name** (for example, the name or location of the property).
- 4 Click **Submit**.
- 5 Access the [Network Settings Page \(page 3-30\)](#).
- 6 Set the **IP Address Method** to **Static** and select a unique **IP address**, **Subnet Mask**, **Gateway**, and **HTTP port number**.
- 7 Click **Submit**.
- 8 Access the [Remote Access Page \(page 3-49\)](#).
- 9 Click **Submit**.

Thermostat Management Interface (TMI)

The Proliphix Thermostat Management Interface (TMI) provides network management capability to control your Professional Series thermostats. This section describes the browser-based configuration using the TMI. Review the instructions in this section prior to configuring your thermostat.

HTML Interface

To access the initial HTML page of the thermostat, enter the unique IP address initially assigned via DHCP (see [page 3-2](#)) and the Web HTTP port number in your browser window. For example:

`http://192.168.111.100:80`

Where 192.168.111.100 is a unique IP address initially assigned via DHCP and 80 is the default (Proliphix assigned) Web HTTP port number. (If you are upgrading your device from a previous version of Proliphix firmware, this port number may be something other than 80. The old port number is carried forward after the firmware upgrade.) After you enter these two fields into the browser, the system displays the first TMI page.



Tip

Proliphix recommends that these parameters be fixed “statically” so that this address can be bookmarked in your browser. Proliphix recommends that you choose a unique static IP address assigned from outside the DHCP server pool of addresses. See the [Network Settings Page \(page 3-30\)](#) for more information on static IP address assignment.

Most of the HTML thermostat pages conform to a standard format which is maintained for both local and remote thermostat access. (See [Figure on page 3-7](#).) A yellow banner at the top of each page contains the following information for each thermostat:

- Model number
- Page title
- Host name of the thermostat

Each thermostat page also includes browser buttons which enable direct access to all other HTML pages on the thermostat. The TMI displays each page in a table format. Each feature table is organized by rows of functions, in a left to right direction as follows:

- Field name
- Function status (in light blue)
- Function control (text boxes and drop-down selections)

Logging In to the Thermostat

When you access the thermostat for the first time, the default **Status & Control (Login)** page appears. Proliphix recommends that either the thermostat administrator (admin) or a user (user) log in to the thermostat from this page. The thermostat's status is visible to either account without logging in, but you must log in to control some of the parameters on this page.



Note

*In each TMI page, you must click **Submit** to apply all changes made in the Control column. Click **Refresh** to update the status.*

Figure 3-1 Status & Control (Login) Page

Thermostat Main Lobby - Status & Control - Microsoft Internet Explorer

Address: <http://198.186.1.50:8081/>

NT150e

STATUS

LOGIN

Click Login

Thermostat Status **Main Lobby**

Temperature *Sunday, April 15, 2007 6:06:58 PM*

Zone Temperature	65.2°F
Local	65.2°F
Relative Humidity	56%
Override	
Cool Setting	85.0°F
Heat Setting	60.0°F
Hold Mode	Off

Schedule Settings

Day Class / Period	Unoccupied / Eve
Cool	85.0°F
Heat	60.0°F

HVAC Settings

HVAC State	Off
HVAC Mode	Auto
Fan State	Off
Fan Mode	Sched
External Relay State	Inactive

Alarm Status

Low Temperature	OK
High Temperature	OK
High Humidity	OK
Filter change	OK

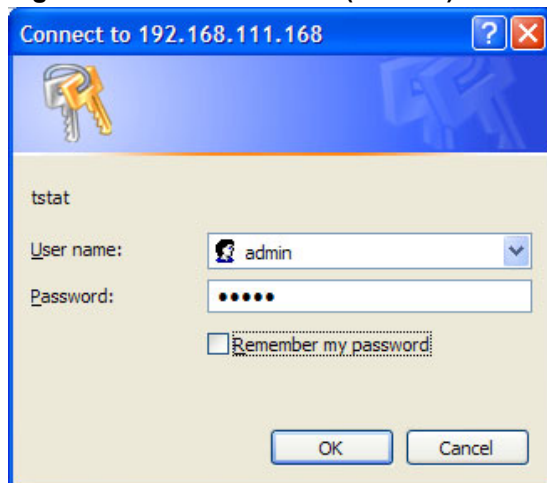
Refresh

To log in and access TMI pages:

- 1 Click **Login**.

The login window appears. (See [Figure 3-2](#).) Proper authentication is required before you can access any other thermostat TMI pages.

Figure 3-2 Administrator (or User) Authentication Window



- 2 Enter the default username and password for the admin or user account as follows: and click **OK**.

Field	Admin Account	User Account
Username	admin	user
Password ^a	admin	admin

^a You can change passwords for each account using the [Password Settings Page](#) (page 3-56).



Note

The Administrator can access all installer-specific pages.

The User account is limited to viewing and controlling the following pages: [Status & Control Page](#) (page 3-9), [General Settings Page](#) (page 3-14), [Setback Schedules Page](#) (page 3-19) and [Password Settings Page](#) (page 3-56).

- 3 Continue with the [Status & Control Page](#).

Status & Control Page

The TMI displays the default **Status & Control** page after authentication. The **Status & Control** page displays a “snapshot” of most of the pertinent information accessible on the thermostat.

Figure 3-3 Status and Control Page

Thermostat Main Lobby - Status & Control - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/index.shtml>

NT150e

Thermostat Status **Main Lobby**

STATUS & CONTROL

GENERAL SETTINGS

SETBACK SCHEDULES

NETWORK SETTINGS

ADVANCED SETTINGS

SENSOR SETTINGS

REMOTE ACCESS

INSTALLER INFO

USAGE COUNTERS

PASSWORD SETTINGS

LOGOUT

Temperature *Sunday, April 15, 2007 6:11:56 PM*

Zone Temperature	65°F	
Local	65°F	
Relative Humidity	57%	
Override		
Cool Setting	85.0°F	85 °F
Heat Setting	60.0°F	60 °F
Hold Mode	Off	Off

Schedule Settings

Day Class / Period	Unoccupied / Eve
Cool	85.0°F
Heat	60.0°F

HVAC Settings

HVAC State	Off
HVAC Mode	Auto
Fan Relay State	Off
Fan Mode	Sched
External Relay State	Inactive

Alarm Status

Low Temperature	OK
High Temperature	OK
High Humidity	OK
Filter change	OK

Use [Table 3-1](#) to configure the **Temperature** status, **Schedule Settings**, **HVAC Settings**, and **Alarm Status** fields.

Table 3-1 Thermostat Status Field Descriptions

Field	Description
Temperature	
Zone Temperature	Displays the current temperature of the local sensor if temperature averaging is disabled. Average temperature of any combination of Local, Remote Sensor #1 (RS #1) or Remote Sensor #2 (RS #2) if temperature averaging is enabled. (See Advanced Settings Page (page 3-35).) In a range of -30°F(-34°C) to 199°F(95°C)
Local (Temperature)	Displays the current temperature of the local sensor. This field is disabled if the local thermostat sensor is not included in temperature averaging. This field is not visible on the NT100e/h thermostat. In a range of 45°F(7°C) to 95°F(35°C)
RS #1	Displays the current temperature of Remote Sensor #1 if this remote thermal sensor is installed and enabled. This field is disabled if RS #1 is not included in temperature averaging. This field is not applicable on the NT100e/h thermostat. (See Advanced Settings Page (page 3-35).) In a range of -30°F(-34°C) to 199°F(95°C)
RS #2	Displays the current temperature of Remote Sensor #2 if this remote thermal sensor is installed and enabled. This field is disabled if RS #2 is not included in temperature averaging. This field is not applicable on the NT100e/h thermostat. (See Advanced Settings Page (page 3-35).) In a range of -30°F(-34°C) to 199°F(95°C)
Relative Humidity (NT150e/h and NT160e/h only)	Displays the relative humidity for the thermostat. The NT150e/h and NT160e/h thermostat is capable of measuring the relative humidity of the local air. The relative humidity is sampled once per minute and has an accuracy of ±3.0%. The reading includes temperature compensation for temperature readings significantly different from 77°F. This field is only applicable on the NT150e/h and NT160e/h thermostat. In a range of 10% to 90% RH
Override	Displays whether Heat or Cool Settings are different from the current scheduled settings. Changes made to either the Heat or Cool Settings (which force an override) remain at those settings until the next scheduled Period change. At the Period change, the settings for either/both heat or cool follow the schedule. (See Schedule Settings (page 3-11).) Override

Table 3-1 Thermostat Status Field Descriptions (Continued)

Field	Description
Cool Setting	Displays the current temperature programmed for the cooling (A/C) system. This field is disabled if the HVAC mode is set to Heat or Off. (See HVAC Mode (page 3-12).) This field is not visible if the thermostat is configured to be a heat-only controlling device. (See Advanced Settings Page (page 3-35).) To modify this field, use the drop-down menu to select a Cool Setting. 40°F(4.5°C) to 99°F(37°C)
Heat Setting	Displays the current temperature programmed for the heating system. This field is disabled if the HVAC mode is set to Cool or Off. (See HVAC Mode (page 3-12).) This field is not visible if the thermostat is configured to be a cool-only controlling device. (See Advanced Settings Page (page 3-35).) To modify this field, use the drop-down menu to select a Heat Setting. 40°F(4.5°C) to 99°F(37°C)
Hold Mode	Displays the current state for both the Heat and Cool Setting. To “hold” the current settings indefinitely or for a prescribed period of time as set on the Advanced Settings Page (page 3-35), use the drop-down menu and choose ■ Hold – Hold mode is enabled. ■ Off (default) – Hold mode is disabled.
Schedule Settings	
Day Class / Period	Displays the current settings for both the scheduled Day Class and Period. (See Setback Schedules Page (page 3-19).)
Cool	Displays the current Cool temperature setting as set within the current Day Class schedule. (See Setback Schedules Page (page 3-19).) 40°F(4.5°C) to 99°F(37°C)
Heat	Displays the current Heat temperature setting as set within the current Day Class schedule. (See Setback Schedules Page (page 3-19).) 40°F(4.5°C) to 99°F(37°C)
HVAC Settings	
HVAC State	Displays the current state of the heating or cooling system. If a state change is made while viewing this page, click Refresh to update the status. ■ Heat – First stage heat is actively heating. ■ Heat2 – First stage and second stage heat are actively heating. (Fuel Burner) ■ Aux Ht – First stage and auxiliary heat are actively heating. (Heat Pump) ■ Cool – First stage cool is actively cooling. ■ Cool2 – First stage and second stage A/C are actively cooling. ■ Off – Neither the heating system or cooling system is active (i.e. on).

Table 3-1 Thermostat Status Field Descriptions (Continued)

Field	Description
HVAC Mode	Displays and controls the current mode setting for the HVAC system. The thermostat can be configured to control the heat system only, cool system only, automatically change over between heating and cooling systems, or control neither system. ■ Off – The thermostat is disabled from controlling either the heating or cooling system. ■ Heat – Heating system only. ■ Cool – Cooling system only. ■ Auto – Automatic changeover between heating and cooling systems
Fan Relay State	Displays the current state of the HVAC fan. ■ Off – The operation of the fan is off. ■ On – The fan is operating.
Fan Mode	Displays and controls the current state setting for the HVAC fan. ■ Auto – Heating or cooling system controls the operation of the fan. ■ On – User forces the fan to the on state independent of the operation of the HVAC system. ■ Schedule – The operation of the fan adheres to a schedule as defined by the user on the Occupied, Unoccupied and Other schedule pages. (See Setback Schedules Page (page 3-19).) <i>Note: When in Schedule mode, the fan continues to work in Auto mode as well.</i>
External Relay State (NT150e/h and NT160e/h only)	Displays the current state of the External Relay. ■ Active – The External Relay has been activated. ■ Inactive – The External Relay is not active.
Alarm Status	
Low Temperature	Displays the current status of the Low Temperature alarm condition. The temperature has fallen below a pre-programmed limit. After this alarm occurs, you must repair the condition which caused the temperature to fall below the configured limit before resetting this alarm. (See General Settings Page (page 3-14).) ■ OK – No Low Temperature alarm exists. ■ Alert! – The temperature monitored within the thermostat has dropped below the pre-set low temperature threshold.
High Temperature	Displays the current status of the High Temperature alarm condition. The zone temperature has risen above a pre-programmed limit. After this alarm occurs, you must repair the condition which caused the temperature to rise above the configured limit before resetting this alarm. (See General Settings Page (page 3-14).) ■ OK – No High Temperature alarm exists. ■ Alert! – The temperature monitored within the thermostat has risen above the pre-set high temperature threshold.

Table 3-1 Thermostat Status Field Descriptions (Continued)

Field	Description
High Humidity (NT150e/h and NT160e/h only)	Displays the current status of the High Humidity alarm condition. The relative humidity has risen above a pre-programmed limit. After this alarm occurs, you must repair the condition which caused the humidity to rise above the configured limit before resetting this alarm. (See General Settings (Alarms and Alerts Pending) Page (page 3-14).) ■ OK – No High Humidity alarm exists. ■ Alert! – The humidity monitored within the thermostat has risen above the pre-set high humidity threshold.
Filter Change	Displays a reminder that the time interval between HVAC filter changes has expired. The air filter(s) should be cleaned or replaced. You should change the filter and then reset this timer. (See General Settings Page (page 3-14).) ■ OK – No filter change is required. ■ Required! – The HVAC filters require changing or cleaning.

General Settings Page

The **General Settings** page contains parameters and settings that enable you to configure the thermostat name and location and set filter replacement reminders.

Figure 3-4 General Settings (Alarms and Alerts Pending) Page

Thermostat Main Lobby - General Settings - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/settings.shtml>

NT150e General Settings Main Lobby

Zone Name

Device Name	Main Lobby	Main Lobby
Site Name	Building 5	Building 5

Thermostat

Serial Number	B80499A2	
SW Ver / HW Rev	SW 2.9.19 / HW C.01	
Temperature Scale	Fahrenheit	Fahrenheit
Backlight	Delay	Delay
Display Contrast	28	28
Button Lockout	Disabled	Disable
Set Point Override	0°F	0 °F

Alarms

Low Temp Limit	Disabled	Disable
High Temp Limit	75.0°F	75 °F
High Humidity Limit	70%	70 %
Filter Reminder	90 Runtime Days	90 Runtime Days
Filter Usage	0.8 Runtime Days	
Filter Last Replaced	Sat Apr 7 2007	☐ Filter Replaced

Date and Time

Sunday, April 15, 2007 6:13:51 PM

Set Date and Time: Sunday, April 15, 2007 5:13:37 PM

☐ Set Thermostat Time ☒ US DST

Refresh Submit

Use [Table 3-2](#) to set the **General Settings** parameters such as the thermostat name and location and enable or disable alarm settings and filter replacement reminders.

Table 3-2 General Settings Field Descriptions

Field	Description
Zone Name	
Device Name	Enter a unique 13 character identifier for the thermostat. You can use the thermostat location in this field (i.e. Main Lobby). This identifier is known as the host name within the data network.
Site Name	Enter a 25 alpha-numeric character name used to identify the thermostat if more than one thermostat intercommunicates with the Proliphix Web Server. (See the <i>Proliphix Remote Access Guide</i> .)
Thermostat	
Serial Number	Displays an eight digit alpha-numeric thermostat serial number (e.g. 8438F399).
SW Ver / HW Rev	Displays the software version / hardware revision .
Temperature Scale	Select either the Fahrenheit or Celsius temperature scales. ■ Fahrenheit (default) – All thermostat temperature readings and reporting are displayed in the Fahrenheit temperature scale (°F). ■ Celsius – All thermostat temperature readings and reporting are displayed in the Celsius temperature scale (°C).
Backlight	Select the LCD backlight control. ■ Delay (default) – The backlight is illuminated when you click a button and remains illuminated for 16 seconds after the last button is clicked. ■ Off – The backlight is disabled from activation. An ambient backlight remains visible.
Display Contrast	Select a value between 20 (lowest contrast between the graphics characters and the background) and 40 (highest character contrast to the background) to indicate the LCD display contrast control. 20, 22, 24, 26, 28 (default), 30, 32, 34, 36, 38, 40
Button Lockout	Select Enable or Disable to indicate the Button Lockout status. When enabled, this feature prevents a user from directly altering the settings of the thermostat from the thermostat's button interface. The button lockout icon appears on the thermostat LCD screen. ■ Disable (default) – Allows normal thermostat button activity. ■ Enable – Prevents unwanted user access at the thermostat button interface except for limited or no temperature adjustments.

Table 3-2 General Settings Field Descriptions (Continued)

Field	Description
Set Point Override	This feature, when used with Button Lockout restricts the use of the thermostat buttons to allow only limited temperature adjustments to be made above and below the preset temperature schedules. This field is disabled if Button Lockout is set to Disable. ■ 0 (default) – No temperature adjustments are allowed. All thermostat buttons are disabled. ■ 1 through 20 – (Fahrenheit) Allowed temperature limits above and below the current scheduled temperature settings. (e.g. If this value is set to 2, the Up and Down buttons may be used to select a temperature within the range of 2°F below/above the current scheduled temperature set point.) ■ .5 through 10 – (Celsius) Allowed temperature limits above and below the current scheduled temperature settings.
Alarms	
Low Temp(erature) Limit	Select a value or Disable to indicate the low temperature threshold detection status. The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature falls below this value, an alarm condition is set and the status is displayed on the Status & Control Page (page 3-9). In addition, this alarm will be sent to the Proliphix web site to trigger an email notification if this function is Enabled. ■ Disable (default) – No low temperature limit is set. ■ -30°F(-34.5°C) to 200°F(93°C) This is a major (red) alarm condition.
Low Temp(erature) Dismiss	If a Low Temp Limit alarm is set and is noted in the Low Temp Dismiss field then the Condition Repaired box must be checked and the Zone Temperature must be above the Low Temp Limit or the Low Temp Limit must be set to Disable for the alarm condition to be cleared upon a Submit.
High Temp(erature) Limit	Select a value or Disable to indicate the high temperature threshold detection status. The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature rises above this value, an alarm condition is set and the status is displayed on the Status & Control Page (page 3-9). In addition, this alarm is sent to the Proliphix web site to trigger an email notification if this function is Enabled. ■ Disable (default) – No high temperature limit is set. ■ -30°F(-34.5°C) to 200°F(93°C) This is a major (red) alarm condition.

Table 3-2 General Settings Field Descriptions (Continued)

Field	Description
High Humidity Limit (NT150e/h and NT160e/h only)	Select a value or Disable to indicate the high humidity threshold detection status. This value is monitored by the thermostat and compared against the current Relative Humidity. If the current Relative Humidity rises above this value, an alarm condition is set and the status is displayed on the Status and Control Page (page 3-9). In addition, this alarm is sent to the Proliphix web site to trigger an email notification if this function is Enabled. ■ Disable (default) – No high humidity limit is set. ■ 10%RH to 90%RH – High Humidity Limit in 5% increments. This is a major (red) alarm condition. If a High Humidity Limit alarm is set and is noted in the High Humidity Dismiss field then the Condition Repaired box must be checked and the relative humidity must be below the High Humidity Limit or the High Humidity Limit must be set to Disable for the alarm condition to be cleared upon a Submit.
High Temp(erature) Dismiss	If a High Temp Limit alarm is set and is noted in the High Temp Dismiss field then the Condition Repaired box must be checked and the Zone Temperature must be below the High Temp Limit or the High Temp Limit must be set to Disable for the alarm condition to be cleared upon a Submit.
Filter (change) Reminder	Select an interval between Disable (default) and 365 days to remind you that the HVAC system requires maintenance. This feature allows you to set time intervals between changing and/or cleaning the HVAC filter. If enabled, an alarm condition is set after the pre-set interval has expired, and is displayed on the Status & Control Page (page 3-9). In addition, this alarm is sent to the Proliphix web site to trigger an email notification if this function is Enabled. This is a minor (yellow) alarm condition. ■ Disable (default) – Interval reminder disabled. ■ 10, 30, 60, 90, 120, 240, 365 Runtime Days – The runtime interval after which an alarm will be set to remind the user of the need for HVAC maintenance.
The TMI displays the following additional fields upon different settings and conditions of the Filter Reminder state.	
Filter Usage	The TMI displays this field when Filter Reminder is enabled. x.x Runtime Days – Displays a running tally of Runtime Days (x.x) which have elapsed since the previous Filter Last Replaced date. If this value is greater than the preset Runtime Days, it is displayed in red and an alarm is generated indicating that the Filter Reminder interval has expired.

Table 3-2 General Settings Field Descriptions (Continued)

Field	Description
Filter Last Replaced	The TMI displays this field when Filter Reminder is enabled. Filter Replaced check box – Checking this box and then clicking Submit, forces the current thermostat date and time into the Date and Time field above and restarts the interval set within the Filter Reminder field above. (e.g. If the filter is changed prior to the Filter Reminder interval expiration, checking this box and clicking Submit restarts the interval timer.)
Date and Time	Displays the stored thermostat date and time marking the time of the beginning of the filter change interval. This date is set after clicking Submit with the Filter Replaced check box checked. (e.g. If a 30 Runtime Days interval is chosen for the Filter Reminder, an alert is generated after 30 runtime days have elapsed from this date.)
Set Date and Time	Displays the date and time of the web browser. Unaltered, this date and time can be assigned to the thermostat by first checking the Set Thermostat Time check box and clicking Submit. If a different date and time is desired, you can change the date and time field prior to checking the Set Thermostat Time check box and clicking Submit. (You can read the date and time of the thermostat directly at the thermostat on the Status & Control Page (page 3-9).
US DST	Check this box to indicate whether the thermostat should adhere to the United States Daylight Savings Time program, while maintaining the date and time. U.S. Daylight Savings Time (US DST) stipulates that the time shall be set ahead an hour at the end of the first Saturday of the month of April every year. In addition, the time shall be set back an hour at the end of the last Saturday of the month of October every year. Check this box and click Submit to observe and set US DST.

Setback Schedules Page

The Professional Series thermostat supports a set of scheduling options that you can configure through the TMI to create customized heating, cooling, or fan schedules.

Figure 3-5 shows an example of the **Setback Schedules** page.

Figure 3-5 Setback Schedules Page

Thermostat Main Lobby - Setback Schedules - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/schedule.shtml>

NT150e

Setback Scheduling Main Lobby

Day Class Schedules

	Occupied				Unoccupied			Other		
Period	Time	Heat	Cool	Time	Heat	Cool	Time	Heat	Cool	
Morn	7:00 am	66.0	74.0	6:00 am	60.0	85.0	6:00 am	55.0	85.0	
Day	9:00 am	66.0	74.0	8:00 am	60.0	85.0	8:00 am	55.0	85.0	
Eve	6:00 pm	66.0	74.0	5:00 pm	60.0	85.0	5:00 pm	55.0	85.0	
Night	10:00 pm	66.0	74.0	10:00 pm	60.0	85.0	10:00 pm	55.0	85.0	

Default Weekly Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Unocc	Occup	Occup	Occup	Occup	Occup	Unocc

Edit Weekly Schedule

Calendar View

April 2007						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Goto month: April 2007

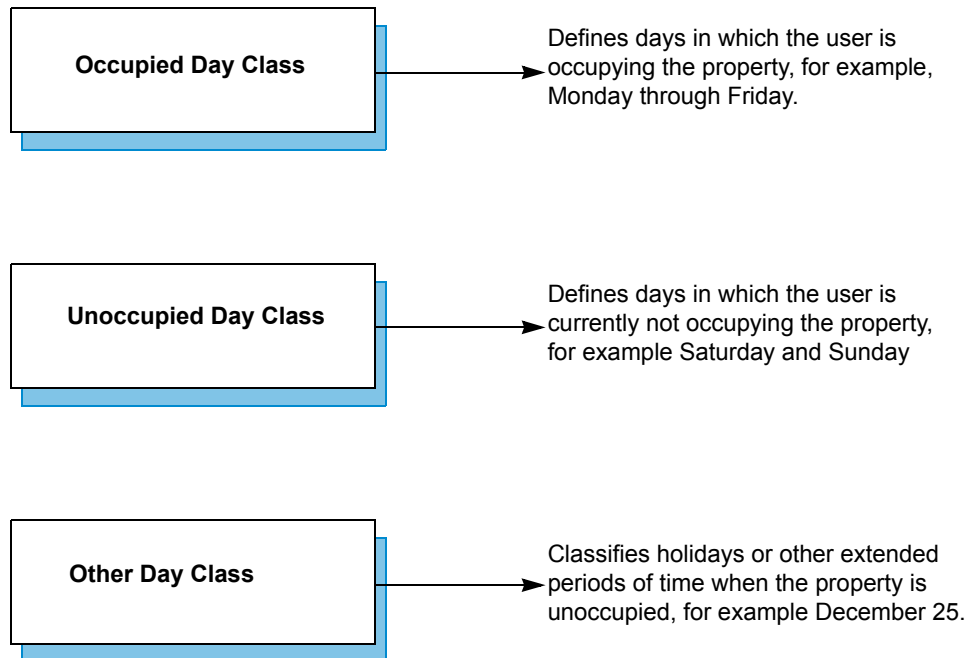
Edit Special Days

Thermostat Scheduling

The thermostat scheduling feature is organized in a hierarchy. You use **Day Classes** to classify the types of days that are used in the schedule. Each **Day Class** is divided into four Periods, each of which supports temperature settings for both heating and cooling, and fan settings to provide periodic air flow.

The TMI supports the following three **Day Classes** shown in [Figure 3-6](#).

Figure 3-6 Day Class Scheduling



Each **Day Class** supports the following four non-overlapping periods of time in which you can independently specify heat, cool, and fan settings.

- **Morning** (pre-business hours)
- **Day** (business hours)
- **Evening** (after hours)
- **Night** (unoccupied hours)

Day Class Schedules

Figure 3-5 on page 3-19 displays **Occupied**, **Unoccupied**, and **Other Day Class Schedules** in the **Day Class Schedules** table. The TMI displays the day class periods and period start times within each row of the table. The TMI also displays the heat and cool settings for each period in each day class. Although the thermostat ships from the factory with pre-set day class period temperature settings, you can change these settings by clicking on the **Day Class** heading (i.e. **Occupied**, **Unoccupied**, and **Other**).



Note

You can edit the Day Class headings on the NT130e/h and NT160e/h models only by highlighting the heading and entering a new heading. Each heading may contain a maximum of 10 characters and the Default Weekly Schedule table displays up to the first 5 characters of the assigned heading.

Default Weekly Schedule

In Figure 3-5 on page 3-19, the **Default Weekly Schedule** table provides a template that you can use to apply the three day classes to each day of the week, for every week of the year. The TMI applies this weekly template to every week in each month that is visible in the **Calendar View** table at the bottom of the [Setback Schedules Page \(page 3-19\)](#).

To edit the **Default Weekly Schedule**, click **Edit Weekly Schedule** and continue with [Default Weekly Schedule \(page 3-24\)](#).

Calendar View

The **Calendar View** table displays the day class settings for each day of the month. You can modify any day class in the **Calendar View** table using any of the following three methods:

- Click on the **date** within the calendar and continue with [Schedule Special Days on page 3-25](#).
- Click **Edit Special Days** and continue with [Schedule Special Days on page 3-25](#).

Occupied, Unoccupied, Other Class Schedule Pages

From the **Occupied, Unoccupied, or Other Class Schedule** page, you can assign both heat and cool temperature settings, as well as fan schedule settings in each of the four schedule Periods. [Figure 3-7](#) shows an example of the **Occupied Day Class Schedule** page. The **Unoccupied** and **Other Schedule** pages displays fields similar to those in [Figure 3-7](#).

Figure 3-7 NT150e/h - Occupied (Unoccupied or Other) Day Class Schedule Page

The screenshot shows a web browser window titled "Thermostat Main Lobby - Occupied Day Class Schedule - Microsoft Internet Explorer". The address bar shows "http://198.168.1.50:8081/schhome.shtml". The page content includes a sidebar with navigation buttons and a main table for the "Occupied" class schedule.

NT150e | **'Occupied' Class Schedule** | **Main Lobby**

Navigation Buttons: STATUS & CONTROL, GENERAL SETTINGS, **SETBACK SCHEDULES**, NETWORK SETTINGS, ADVANCED SETTINGS, SENSOR SETTINGS, REMOTE ACCESS, INSTALLER INFO, USAGE COUNTERS, PASSWORD SETTINGS, LOGOUT.

Occupied						
Period	Time			Heat	Cool	Fan Schedule
Morn	7	00	am	66	74	Disable
Day	9	00	am	66	74	Disable
Eve	6	00	pm	66	74	Disable
Night	10	00	pm	66	74	Disable

Submit

Use [Table 3-3](#) to modify the **Occupied**, **Unoccupied**, or **Other Class Schedule** page fields.

Table 3-3 Occupied (Unoccupied or Other) Class Schedule Field Descriptions

Field	Description
Period	Displays one of four time periods of the day.
Time	Use the drop-down menu to modify the time period in 15 minute increments. Includes AM / PM indicator. <i>Note: You can modify the time period in 5 minute increments on the NT130e/h and NT160e/h models only.</i>
Heat (Temp)	Use the drop-down menu to select a heat temperature setback setting between 40°F(3.5°C) to 99°F(36°C) .
Cool (Temp)	Use the drop-down menu to select a cool temperature setback setting between 40°F(3.5°C) to 99°F(36°C) .
Fan Sche(dule)	Select the time in each hour of the Period in which the fan will be On. The schedule begins on the hour and advances for the duration specified. Note that within the hour of each Period but outside the schedule interval, the fan reverts to AUTO mode to ensure proper operation for either a heating or cooling call to the HVAC system. Select one of the following options: ■ Disable/Off (default) – No fan operation scheduled within this Period. ■ On – Fan is forced On for the entire hour, for every hour, within this Period. ■ 15, 30, 45 minutes – Fan is forced On for this selected duration, beginning at the top of the hour, for every hour, within this period.
Relay Sched (NT160e/h only)	Select the time in each hour of the Period in which the External Relay Trigger will be On. The schedule begins on the hour and advances for the duration specified. Select one of the following options: ■ Off (default) – No External Relay Trigger scheduled within this Period. ■ On – External Relay Trigger is forced On for the entire hour, for every hour, within this Period. ■ 15, 30, 45 minutes – External Relay Trigger is forced On for this selected duration, beginning at the top of the hour, for every hour, within this Period.

Default Weekly Schedule

From the **Default Weekly Schedule** page, you can assign one of three **Day Classes** (see [Figure 3-6 on page 3-20](#)) to each of the seven days of the week.

Figure 3-8 Default Weekly Schedule Page

Day	Class
Sunday	Unoccupied
Monday	Occupied
Tuesday	Occupied
Wednesday	Occupied
Thursday	Occupied
Friday	Occupied
Saturday	Unoccupied

Submit

Use [Table 3-4](#) to assign **Day Classes** to each day of the week.

Table 3-4 Default Weekly Schedule Field Descriptions

Field	Description
Day	Displays the seven days of the week.
Class	Select one of three Day Classes for each day of the week: ■ Occupied – Occupied Day Class. ■ Unoccupied – Unoccupied Day Class. ■ Other – Other Day Class. See Figure 3-6 on page 3-20 for more information.

Schedule Special Days

From the **Schedule Special Days** page, you can select any day of the current or future month and assign a day class different from what is specified in the [Default Weekly Schedule \(page 3-24\)](#). For example, if your **Default Weekly Schedule** is configured for every Monday through Friday as **Occupied** and you want to schedule a national holiday or a company shutdown, go to the [Schedule Special Days \(page 3-25\)](#) and configure the day(s) or week(s) as **Other** schedule. This allows you to designate certain days, weeks, or months to be different from the default schedule.

Special Days entries are organized as rows in the **Special Days** table. The TMI supports 15 **Special Days** table entries, each comprised of a start date entered in the **Day, Month, Year** field. In each row, you can enter one or more days as a duration for that entry. Durations cannot exceed 60 days.

Figure 3-9 Schedule Special Days Page

Thermostat Main Lobby - Scheduled Special Days - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/specdays.shtml>

Special Days Main Lobby

Day	Month	Year	Duration (in days)	Day Class
unused	Every	Every	1	Occup

Add Day Refresh Back to schedule Submit

Special Days Examples

This section describes some examples of **Special Days**.

Example 1

Figure 3-10 on page 3-27 shows an example of changing the **Day Class** on December 21, 2007 from an **Occupied Day Class** (i.e. a typical work day) to an **Unoccupied Day Class**. This represents a change to the default weekly schedule for the last week in December and requires a single **Special Days** entry in the table.

You can enter this information in the **Special Days** table using either of the following methods:

- Click directly on the **date** on the **Calendar View**. (See Figure 3-5 on page 3-19.) Figure 3-10 on page 3-27 appears and the TMI automatically populates all the fields in the row except the **Day Class** setting. **One** day is the default duration, but you can change this field to any number of days less than the 60 day maximum. The [Setback Schedules Page \(page 3-19\)](#) appears.
- Click **Edit Special Days**. (See Figure 3-5 on page 3-19.) Figure 3-10 on page 3-27 appears. Configure all fields in the **Special Days Table**. Click **Submit**. The [Setback Schedules Page \(page 3-19\)](#) appears.

Figure 3-10 Special Days Table Page (Example 1)

Thermostat Main Lobby - Scheduled Special Days - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/specdays.shtml> Go

Back Forward Stop Home Search SnagIt Links Web assistant

Y! Search Web Mail

NT150e **Special Days** **Main Lobby**

STATUS & CONTROL
 GENERAL SETTINGS
SETBACK SCHEDULES
 NETWORK SETTINGS
 ADVANCED SETTINGS
 SENSOR SETTINGS
 REMOTE ACCESS
 INSTALLER INFO
 USAGE COUNTERS
 PASSWORD SETTINGS
 LOGOUT

Day	Month	Year	Duration (in days)	Day Class
21	Dec	2007	1	Unocc

Add Day Refresh Back to schedule Submit

Internet

Example 2

Figure 3-11 shows an example of adding a week-long period to the thermostat schedule from the December 23, 2007 through December 29, 2007.

Figure 3-11 Special Days Table Page (Example 2)

Day	Month	Year	Duration (in days)	Day Class
21	Dec	2007	1	Unocc
23	Dec	2007	7	Other

Buttons: Add Day, Refresh, Back to schedule, Submit

For example, to add a week-long holiday period:

- 1 Click **Edit Special Days** (from Figure 3-5 on page 3-19). Figure 3-11 appears.
- 2 Enter all fields. The **Day Class** field is updated to **Other**.
- 3 Click **Submit**. The **Setback Schedules Page** (page 3-19) appears.



To remove any of the **Special Days**, you must change the **Day** field to **Unused** and click **Submit**.

The [Setback Schedules Page](#) now displays the two **Special Days** entries in the **Calendar View**.

Figure 3-12 Setback Schedules Page

Thermostat Main Lobby - Setback Schedules - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/schedule.shtml?month=12&year=2007>

CONTROL
GENERAL SETTINGS
SETBACK SCHEDULES
NETWORK SETTINGS
ADVANCED SETTINGS
SENSOR SETTINGS
REMOTE ACCESS
INSTALLER INFO
USAGE COUNTERS
PASSWORD SETTINGS
LOGOUT

Occupied			Unoccupied			Other			
Period	Time	Heat	Cool	Time	Heat	Cool	Time	Heat	Cool
Morn	7:00 am	66.0	74.0	6:00 am	60.0	85.0	6:00 am	55.0	85.0
Day	9:00 am	66.0	74.0	8:00 am	60.0	85.0	8:00 am	55.0	85.0
Eve	6:00 pm	66.0	74.0	5:00 pm	60.0	85.0	5:00 pm	55.0	85.0
Night	10:00 pm	66.0	74.0	10:00 pm	60.0	85.0	10:00 pm	55.0	85.0

Default Weekly Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Unocc	Occup	Occup	Occup	Occup	Occup	Unocc

Edit Weekly Schedule

Calendar View

December 2007						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Goto month: April 2007

Edit Special Days

Special days highlighted in red.

Network Settings Page

From the **Network Settings Page**, you can configure the appropriate network parameters specific to your local network such as configuring the **Syslog** server address to receive messages and alerts.

Figure 3-13 Network Settings Page

NT150e **Network Settings** **Main Lobby**

Addressing

MAC Address	00:11:49:00:08:ae	
IP Address Method	Static	Static
IP Address	192.168.1.150	192.168.1.150
Subnet Mask	255.255.255.0	255.255.255.0
Gateway	192.168.1.1	192.168.1.1

Firewall Settings

Inbound Port	8081	8081
--------------	------	------

Web Server

HTTP Port	80	80
-----------	----	----

LAN Auto-Discovery

Broadcast Port ¹	9763	9763
-----------------------------	------	------

Security

Access Filter	Disabled	Local Subnet ☐ User Defined ☐
Network Address	0.0.0.0	0.0.0.0
Network Mask	0.0.0.0	0.0.0.0

Syslog Setup

Address	0.0.0.0	0.0.0.0
Port	514	514
Repeat Interval	1 min(s)	1 min(s)
	Refresh	Submit

¹Set Discovery Port to 0 to disable.

Use [Table 3-5](#) to configure the **Network Settings** fields.

Table 3-5 Network Settings Field Descriptions

Field	Description
Addressing	
MAC Address	Displays a factory assigned value installed in the thermostat which uniquely identifies the thermostat on the local network for transmitting and receiving network information. The system displays the MAC address in the format of 00:11:49:AB:CD:EF, where AB:CD:EF is a unique value for each thermostat.
IP Address Method	Select the method by which the thermostat receives the unique Internet Protocol address for the local network. IP addressing can be either automatically assigned via a local DHCP server or manually (Static) assigned by the user. (See DHCP Assigned IP Addresses (page 3-2).) ■ DHCP (default) – IP addressing method is DHCP assigned. ■ Static – IP address is manually assigned by the user. After the initial configuration of the thermostat, you should assign IP address to Static to ensure a permanent IP address assignment for remote access or for simplified local access.
IP Address	Displays the unique Internet Protocol address either assigned statically or by DHCP. (See IP Address Method.) (You must click Submit after changing this parameter to invoke a software reset to set the new value.) A.B.C.D – Four field standard dot notation for IP address designation.
Subnet Mask	Enter the IP subnet on which the thermostat IP address is assigned. The subnet can include 256, 65536 or 16772216 IP addresses. (You must click Submit after changing this parameter to invoke a software reset to set the new value.) Subnet Mask options include: ■ X.Y.Z.C – Class C address subnet. There can be 256 IP addresses in this subnet. ■ X.Y.B.B – Class B address subnet. There can be 65,536 IP addresses in this subnet. ■ X.A.A.A – Class A address subnet. There can be 16,772,216 IP addresses in this subnet.
Gateway (Address)	Enter the IP address of the router which acts as a gateway for the thermostats to communicate to other devices in another subnet. The thermostat uses this address when it needs to communicate with the Proliphix Web Server for remote access. (You must click Submit after changing this parameter to invoke a software reset to set the new value.) A.B.C.D – Four field standard dot notation for IP address designation.

Table 3-5 Network Settings Field Descriptions (Continued)

Field	Description
Firewall Settings	
Inbound Port	Enter the IP port number to be configured on a local firewall router to allow inbound WAN traffic access to the thermostat for remote management. This feature is used only by the Proliphix Remote Management Server. The thermostat uses this value, along with the WAN IP address, to notify the server which port is to be used when the server wants to contact the thermostat on an internal LAN. wxyz – (default = 8081) Four digit (max) standard IP port number designation.
Web Server	
HTTP Port	Enter the IP port number of the HTTP server within the thermostat. This field defines the IP port number assigned to the web server internal to the thermostat for remote access. Note that if you are trying to access the thermostat's Web pages, then you must be able to access the thermostat on this port. (You must click Submit after changing this parameter to invoke a software reset to set the new value.) wxyz – Four digit (max) standard IP port number designation. The default port number is 80.
LAN Auto-Discovery	
Broadcast Port	Allows you to specify to which port the thermostat responds to queries when interrogated by the Device Locator program in the Proliphix Device Utility tool. The Device Locator Program is a utility program that allows you to auto-discover the Proliphix devices on your network.
Security	

Table 3-5 Network Settings Field Descriptions (Continued)

Field	Description
Access Filter	Select the check box to enable Access Filters. The Access Filter restricts access to the thermostat from network devices whose IP addresses are outside the range specified in the accompanying fields. Network administrators can provision varying levels of security based on combinations of the administrator/user passwords as well as these address filter levels. If both of these option levels are disabled (unchecked), the thermostat is exposed to access from all network devices located anywhere in the IP address space and is only protected with user/admin password authentication. ■ Local Subnet – (default is unchecked) The thermostat can be accessed within a class C subnet. (e.g. 192.168.111.x where “x” is 0 to 254) ■ User Defined – (default is unchecked) The thermostat can be accessed by network devices which reside in the address space as specified by both the Network Address and Network Mask fields. This option is typically used in corporate environments with large LANs which include many routed subnets.
Network Address	If the User Defined Access Filter is selected, this field displays the unique Internet Protocol address required in conjunction with the Network Mask to allow network accesses. A.B.C.D – Four field standard dot notation for IP address designation.
Network Mask	If the User Defined Access Filter is selected, this field displays the network mask required in conjunction with the Network Address to allow network accesses. This field defines the IP subnet from which network accesses is allowed. The subnet can include 256, 65536 or 16772216 IP addresses. ■ X.Y.Z.C – Class C address subnet. There can be 255 IP addresses in this subnet. ■ X.Y.B.B – Class B address subnet. There can be 65,536 IP addresses in this subnet. ■ X.A.A.A – Class A address subnet. There can be 16,772,216 IP addresses in this subnet.
Syslog Setup	
Address	Enter the Syslog server IP address. The IP address can be either a single address, multicast, or broadcast address. A.B.C.D – Four field standard dot notation for IP address designation. Alarms that are delivered to the Proliphix Remote Management Server are also delivered to the Syslog server. The alarm status is delivered to the Proliphix Remote Management Server independent of the Syslog messages. Note that you can disable Syslog messages by setting either the destination IP address or port address to zero (0.0.0.0 or 0).

Table 3-5 Network Settings Field Descriptions (Continued)

Field	Description
Port	Enter the Syslog server IP port, which allows you to use a custom program to receive alarm/alert notifications. wxyz – Four digit (max) standard IP port number designation. The default port number is 514.
Repeat Interval	Select the Syslog messaging periodic interval. This is the rate at which Syslog messages are emitted from the thermostat. 1, 5, 30, 60 –The amount of time in minutes between successive Syslog messages sent by the thermostat after an error event and before the error event is cleared. Syslog alarm/alert messages are sent to the Syslog server every minute until the alarm/alert condition is cleared on the thermostat. Alarm/alert messages are sent with a Local7 Facility Code and with a severity level of Alert as defined in RFC 3164. In addition to alarms and alerts, the System Start event (generated during thermostat start up) is also reported to the Syslog server. These events are not repetitive but only occur once when the event occurs.

Advanced Settings Page

The **Advanced Settings** page enables you to customize the thermostat by selecting the HVAC type and setting heating and cooling parameters.

How you configure your thermostat depends on the type of HVAC system you have, Heat Pump or Fuel Burner.

Figure 3-14 shows the Advanced Settings page for a Heat Pump HVAC system.

Figure 3-14 Advance Settings Page - Heat Pump HVAC

The screenshot shows a web browser window titled "Thermostat Main Lobby - Advanced Settings - Microsoft Internet Explorer". The address bar shows "http://198.168.1.50:8081/adv.shtml". The page has a sidebar on the left with navigation links: STATUS & CONTROL, GENERAL SETTINGS, SETBACK SCHEDULES, NETWORK SETTINGS, **ADVANCED SETTINGS** (highlighted in red), SENSOR SETTINGS, REMOTE ACCESS, INSTALLER INFO, USAGE COUNTERS, PASSWORD SETTINGS, and LOGOUT. The main content area is titled "Advanced Settings" and "Main Lobby". It contains several configuration sections:

- HVAC Configuration**

HVAC System Type	Heat Pump	Heat Pump
Reverse Valve Polarity	O	O
Heat Control	2H	2H
2nd Stage Offset	-2.0°F	-2 °F
Auxiliary Heat	Enable w/ Comp	Enable w/ Comp
Aux Heat Offset	-2.0°F	-2 °F
Cool Control	2C	2C
2nd Stage Offset	+2.0°F	+2 °F
- Thermostat Configuration**

Hold Mode Duration	3 hr	3 hr
Compressor Delay	3 min	3 min
2nd Stage Delay	0 min	0 min
Fan on Heat	Enabled	Enable
Setpoint Differential	2.0°F	2 °F
Max Cool Cycles/hr	Disabled	Disable
Max Heat Cycles/hr	Disabled	Disable
A/C Humidity Control	90% RH	90 % RH
- External Relay Configuration**

External Relay Trigger	Below Humidity	Below Humidity
Threshold	45%	45 %
Activate Polarity	Closed	Closed
Activate HVAC Fan	Disabled	Disable
- Thermostat Initialization**

Reset on Submit	No Action
-----------------	-----------

At the bottom of the configuration sections are "Refresh" and "Submit" buttons.

Figure 3-15 shows the Advanced Settings page for a Fuel Burner HVAC system.

Figure 3-15 Advanced Settings Page - Fuel Burner HVAC

The screenshot shows the 'Advanced Settings' page for an NT150e thermostat. The browser window title is 'Thermostat Main Lobby - Advanced Settings - Microsoft Internet Explorer'. The address bar shows 'http://198.169.1.50:8081/adv.shtml'. The page has a sidebar with navigation buttons: STATUS & CONTROL, GENERAL SETTINGS, SETBACK SCHEDULES, NETWORK SETTINGS, **ADVANCED SETTINGS** (highlighted in red), SENSOR SETTINGS, REMOTE ACCESS, INSTALLER INFO, USAGE COUNTERS, PASSWORD SETTINGS, and LOGOUT. The main content area is titled 'Advanced Settings' and 'Main Lobby'. It contains several configuration sections:

- HVAC Configuration**

HVAC System Type	Fuel Burner	Fuel Burner ▼
Heat Control	2H	2H ▼
2nd Stage Offset	-2.0°F	-2 ▼ °F
Cool Control	2C	2C ▼
2nd Stage Offset	+2.0°F	+2 ▼ °F
- Thermostat Configuration**

Hold Mode Duration	3 hr	3 ▼ hr
Compressor Delay	3 min	3 ▼ min
2nd Stage Delay	0 min	0 ▼ min
Fan on Heat	Enabled	Enable ▼
Setpoint Differential	2.0°F	2 ▼ °F
Max Cool Cycles/hr	Disabled	Disable ▼
Max Heat Cycles/hr	Disabled	Disable ▼
A/C Humidity Control	90% RH	90 ▼ % RH
- External Relay Configuration**

External Relay Trigger	Below Humidity	Below Humidity ▼
Threshold	45%	45 ▼ %
Activate Polarity	Closed	Closed ▼
Activate HVAC Fan	Disabled	Disable ▼
- Thermostat Initialization**

Reset on Submit	No Action ▼
-----------------	-------------

At the bottom of the configuration sections are 'Refresh' and 'Submit' buttons. The browser status bar at the bottom shows 'Done' and 'Internet'.

Use [Table 3-6](#) to configure the **Advanced Settings** for a parameters.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
HVAC System Type	Select the type of HVAC system, either Fuel Burner (default) or Heat Pump HVAC systems as follows: ■ Fuel Burner (default) – The HVAC system burns fossil fuels (e.g. gas or oil). Typically the system includes either an oil or gas fired boiler or furnace. See Figure 3-15 on page 3-36 and continue with If Your HVAC System is a Fuel Burner (page 3-37). ■ Heat Pump – Specifies that the HVAC system is based on an electric compressor. See Figure 3-14 on page 3-35 and continue with If Your HVAC System is a Heat Pump (page 3-38). <i>Note: When selecting between either Fuel Burner or Heat Pump or between Heat Pump and Fuel Burner, the HVAC Mode must be set to Off prior to selecting the opposite setting. See the Status & Control Page (page 3-9).</i>
<i>If Your HVAC System is a Fuel Burner</i>	
Heat Control	Select the HVAC control for this thermostat. This parameter describes the thermostat capability to control a single stage or dual stage heating system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat. (See Cool Control (page 3-38).) ■ Disable – No heating system exists. (A/C only thermostat.) ■ 1H – Enables the heating system as a standard single stage system. ■ 2H (default) – Enables the heating system as a dual stage system.
2 nd Stage Offset	Specify the second stage heat set point temperature referenced to the first stage heat set point temperature. This parameter is only enabled when 2H Heat Control is selected, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 70°F, and this parameter were set to -3°F, the second stage heat would activate at or below 67°F). Temperatures include: 0, -2, -3, -4, -5, -6 °F (0, -1.0, -1.5, -2.0, -2.5, -3.0 °C) – Second stage heat temperature offset from first stage heat set point temperature.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Cool Control	Specify the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a single stage or dual stage cooling system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat. (See Heat Control (page 3-37).) ■ Disable – Specifies that there is no cooling system present. (heat-only thermostat.) ■ 1C – Enables the cooling system as a standard single stage system. ■ 2C (default) – Enables the cooling system as a dual stage system.
2 nd Stage Offset	Specifies the second stage cool set point temperature referenced to the first stage cool set point temperature. This parameter is only enabled when 2H Cool Control is selected, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 72°F, and this parameter were set to 3°F, the second stage A/C would activate at or above 75°F). Temperatures include: 0, +2, +3, +4, +5, +6 °F (0, +1.0, +1.5, +2.0, +2.5, +3.0 °C) – Second stage A/C temperature offset from first stage A/C set point temperature.

If Your HVAC System is a Heat Pump

Reverse Valve Polarity	Enables you to control the direction of the heating and cooling modes. ■ O – Indicates that the heat pump normally runs in heat mode and when the reversing valve is activated then the heat pump will run in cooling mode. ■ B – Indicates that the heat pump normally runs in cool mode and when the reversing valve is activated then the heat pump will run in heating mode.
Heat Control	Specifies the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a heat pump system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat. (See Cool Control (page 3-39).) ■ Disable – Specifies that there is no heating system present. (A/C only thermostat.) ■ 2H (default) – Enables the heat pump as a dual stage heating system. ■ 1H – Enables the heat pump as a standard single stage heating system.
2 nd Stage Offset	This parameter is only enabled when 2H Heat Control is selected, otherwise it is disabled. 0,-2, -3, -4, -5, -6 °F (0,-1.0, -1.5, -2.0, -2.5, -3.0 °C)

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Auxiliary Heat	Specifies a secondary source of heat outside the heat pump system, for example, electric baseboard or a gas furnace. ■ Disable – Disables Auxiliary Heat. ■ Enable w/ Comp – Enables the compressor when Auxiliary Heat is active. ■ Enable w/o Comp – Disables the compressor when Auxiliary heat is active.
Aux Heat Offset	Specifies the auxiliary heat set point temperature referenced to the first stage heat set point temperature. This parameter is only enabled when Auxiliary Heat is enabled, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 70°F, and this parameter were set to -3°F, the auxiliary heat would activate at or below 67°F). Temperatures include: 0, -2, -3, -4, -5, -6 °F (0, -1.0, -1.5, -2.0, -2.5, -3.0 °C) – Second stage heat temperature offset from first stage heat set point temperature.
Cool Control	Specifies the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a heat pump system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat. (See Heat Control (page 3-37).) ■ Disable – Specifies that there is no cooling system present. (Heat only thermostat.) ■ 2C – Enables the heat pump as a standard dual stage cooling system. ■ 1C – Enables the heat pump as a standard single stage cooling system.
2 nd Stage Offset	Specifies a secondary source of cool air outside the heat pump system, for example, electric baseboard or a gas furnace. This parameter is only enabled when 2C Cool Control is enabled, otherwise it is disabled. 0, +2, +3, +4, +5, +6 °F (0, +1.0, +1.5, +2.0, +2.5, +3.0 °C).
Thermostat Configuration	
Hold Mode Duration (NT100e/h, NT120e/h, and NT150e/h only)	Specifies the time interval in which the thermostat temperature setting are held independent of schedule changes due to Period or Day Class advancements. ■ Perm – The Hold period is indefinite and the temperature setting are “held” until the user removes this condition. ■ 1, 3, 8, 12, 24 –The amount of time in hours in which the current temperature setting are “held” and inhibited from change. The default interval is 3 hours.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Hold/OBO (One Button Override) Duration (NT130e/h and NT160e/h only)	When Button Lockout is disabled, this specifies the time interval for the Hold function in which the thermostat temperature settings are held independent of schedule changes due to Period or Day Class advancements. When Button Lockout is enabled, this specifies the time interval for One Button Override (OBO) in which the thermostat temperature setpoints of Class #1 Day Period are used. ■ Perm – The period is indefinite and the temperature setting are either “held” or referred back to the temperature settings noted in the Day Class Schedule for the specific Period until the user removes this condition. ■ 1, 2, 3, 4, 8, 12, 24 –The amount of time in hours in which the current temperature settings are either “held” or referred back to the temperature settings noted in the Class #1 Day Period. The default interval is 3 hours.
Compressor Delay	Specify the minimum time (in minutes) between successive heating, cooling or heat to cool and cool to heat cycles in heat pump applications. This parameter ensures a safe heat pump compressor delay or off time guaranteed between cycles. This parameter may also be used in fuel burner mode, whereby this parameter ensures a safe A/C compressor delay or off time guaranteed between A/C cycles. ■ 0 – Enables the cooling system to cycle immediately upon completion of the previous cycle. This is a diagnostic feature and should not be left in this state or compressor short cycling and subsequent damage may occur to the compressor. ■ 3 through 10 – Time in minutes required between the completion of a cooling cycle and the next subsequent cooling cycle. The default delay is 3 minutes.
2 nd Stage Delay	Specifies the delay between the 1st stage activation and 2nd stage activation. This feature also controls the delay when configured as a single stage heat pump and when the start of an Auxiliary Heat cycle occurs. 0, 15, 30, 45, 60, 90 - Time in minutes
Fan on Heat	Controls the fan state during heating cycles. In most HVAC applications, heat activation automatically turns on the fan, but in radiant or baseboard heat applications, the fan is activated by the thermostat upon a call for heat if this feature is enabled. ■ Enabled – The fan is forced ‘on’ during heat cycles. ■ Disabled – The fan is <i>not</i> forced on during heat cycles.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Setpoint Differential	Establishes the temperature limits above and below the established setpoint, within which the heating or cooling cycle is activated and maintained. The anticipator algorithm operates within this differential range about the setpoint. Optimal comfort is achieved when this differential is set to 2 (default) or +/- 1°F about the setpoint. Reduced cycle time is achieved with a larger differential setting (e.g. 4) or +/- 2 °F about the setpoint. This feature is most often used with the Max Cycles per hour features below. ■ 2 °F (1 °C)- +/- 1 °F, (.5 °C) about the setpoint. ■ 3 °F (1.5 °C)- +/- 1.5°F, (.75 °C) about the setpoint. ■ 4 °F (2 °C)- +/- 2 °F, (1.0 °C) about the setpoint. ■ 5 °F (2.5 °C)- +/- 2.5 °F, (1.25 °C) about the setpoint. ■ 6 °F (3 °C)- +/- 3 °F, (1.5 °C) about the setpoint.
Max Cool Cycles/hr	Limits the number of cooling cycles every hour. If this value is 3 (default) for example, a cooling cycle can be invoked once in each of the three 20-minute hourly intervals. In this example, a subsequent call for cool after the initial cool call in a 20-minute interval is deferred until the start of the next 20-minute interval. This feature can be defeated by the user if changes are made to override the setpoint settings, either at the thermostat or via the TMI. This feature only applies to scheduled temperature settings. ■ Disable – This feature is disabled and unlimited cooling cycles are allowed. ■ 1-6, 10, 12 – The allowable number of cooling cycles per hour.
Max Heat Cycles/hr	Limits the number of heating cycles every hour. If this value is 5 (default) for example, a cooling cycle can be invoked once in each of the five 12-minute hourly intervals. In this example, a subsequent call for heat after the initial heat call in a 12-minute interval is deferred until the start of the next 12 minute interval. This feature can be defeated by the user if changes are made to override the setpoint settings, either at the thermostat or via the TMI. This feature only applies to scheduled temperature settings. ■ Disable – This feature is disabled and unlimited heating cycles are allowed. ■ 1-6, 10, 12 – The allowable number of heating cycles per hour.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
A/C Humidity Control (NT150e/h and NT160e/h only)	Select a relative humidity value from 10% to 90%. When the measured RH rises above a preset threshold, the HVAC cooling cycle is initiated. The cycle continues until the humidity level falls 5% below the trigger level or until a heat setpoint is encountered. When a heat setpoint is encountered, the HVAC heating cycle is invoked. After the heat setpoint has been satisfied, the HVAC cooling cycle (to satisfy humidity requirements) is delayed for 5 minutes. Humidity control is intended for moderate moisture control. High humidity environments should also include secondary dehumidification equipment. ■ Disable – This feature is disabled and the A/C system may not be used to reduce humidity. ■ 10% – 90% – Humidity threshold expressed in 5% increments.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
External Relay Configuration	
External Relay Trigger (NT150e/h and NT160e/h only)	The NT150 and NT160 models include an additional relay that can be activated by several user-defined triggers. The additional relay can be triggered in response to the following events. – Zone temperature above a temperature threshold – Zone temperature below a temperature threshold – Relative Humidity above a temperature threshold – Relative Humidity below a temperature threshold – Scheduled time occurs The temperature range is from -30°F to +200°F. The humidity range is from 10% to 90%. The above/below temperature relay activation is used to turn on alarming equipment. The above/below humidity feature is used to control external humidification/dehumidification equipment. ■ Disable – Disables the External Relay Trigger. ■ Above Humidity – Upper limit above which excessive relative humidity activates the External Relay. (See Threshold (NT150e/h and NT160e/h only) (page 3-44).) When the relative humidity falls 5% below the trigger point, the External Relay is deactivated. ■ Below Humidity – Lower limit below which lower relative humidity activates the External Relay. (See Threshold (NT150e/h and NT160e/h only) (page 3-44).) When the relative humidity rises 5% above the trigger point, the External Relay is deactivated. ■ Above Temperature – Upper limit above which temperature activates the External Relay. When the temperature falls below trigger threshold minus the setpoint differential, the relay is deactivated. ■ Below Temperature – Lower limit below which temperature activates the External Relay. When the temperature rises above the trigger threshold plus the setpoint differential, the relay is deactivated. ■ Scheduled – The External Relay Trigger is scheduled. Note that the Scheduled option is available on the NT160e/h only.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Threshold (NT150e/h and NT160e/h only)	Depending on the action selected by the External Relay Trigger (NT150e/h and NT160e/h only) (page 3-43), this setting represents the limits of either temperature or relative humidity as required by the External Relay Trigger action above. This setting is measured in either % relative humidity or degrees Fahrenheit/Celsius. ■ 10% to 90% RH – For Above humidity limits. When the relative humidity rises above this trigger point, the external relay is activated. When the relative humidity falls 5% below the trigger point, the relay is deactivated. ■ 10% to 90% RH – For Below humidity limits. When the relative humidity falls below the trigger point, the external relay is activated. When the relative humidity rises 5% above the trigger point, the relay is deactivated. ■ -30°F(-34°C) to 200°F(95°C) – For Above temperature limits. When the average temperature rises above this trigger point, the External Relay is activated. When the temperature falls below trigger setpoint minus the setpoint differential, the relay is deactivated. ■ -30°F(-34°C) to 200°F(95°C) – For Below temperature limits. When the average temperature falls below the trigger point, the External Relay is activated. When the temperature rises above the trigger setpoint plus the setpoint differential, the relay is deactivated.
Activate Polarity (NT150e/h and NT160e/h only)	Select Open or Closed for the active state of the External Relay. For example, when the relay is set to a polarity of Closed, the relay closes and completes the external circuit when activated. ■ Open – Contacts are open and the external circuit is unswitched. ■ Closed – Contacts are closed and the external circuit is completed.
Activate HVAC Fan (NT150e/h and NT160e/h only)	Select Enable to activate the HVAC fan when the External Relay is activated. The HVAC fan turns off when the External Relay is deactivated. This feature is best applied when humidification or de/humidification is performed by additional equipment outside the HVAC system but the same duct work is used. ■ Enable – Allow airflow in the duct work during External Relay activation. ■ Disable – Disallow airflow in the duct work during External Relay activation.

Table 3-6 Advanced Settings Fields - HVAC Fuel Burner Field Descriptions

Field	Description
Reset on Submit	Consult a Proliphix support representative prior to changing this setting. Performs a software reset on the thermostat. All current settings are maintained after the execution of this reset. This reset is performed to return the thermostat to a known state after abnormal behavior. ■ No Action (default) – A software reset is NOT performed after clicking Submit. ■ Software Reset – Invokes a software reset after clicking Submit.

Sensor Settings Page

From the **Sensor Settings** page, you can add external thermal sensors and configure zone temperature thermal averaging of the Local or the two Remote Sensors.



Note

This page is not available on the NT100e/h Network Thermostat because the NT100e/h does not support external thermal sensors.

Figure 3-16 Sensor Settings Page

NT150e **Sensor Settings** **Main Lobby**

Local Sensor

State	Enabled	Enable ▾
Sensor Averaging	Disabled	Disable ▾
Sensor Correction	5.0°F	5 ▾ °F

Remote Sensor 1

Name	Front lobby	Front lobby
State	Disabled	Disable ▾
Sensor Type	Thermistor	Thermistor ▾
Sensor Averaging	Disabled	Disable ▾
Sensor Correction	0.0°F	0 ▾ °F

Remote Sensor 2

Name	East entry	East entry
State	Disabled	Disable ▾
Sensor Type	Thermistor	Thermistor ▾
Sensor Averaging	Disabled	Disable ▾
Sensor Correction	0.0°F	0 ▾ °F

Refresh Submit

Use [Table 3-7](#) to complete the **Sensor Settings** page fields.

Table 3-7 Sensor Settings Field Descriptions

Field	Description
Local Sensor	
State	Select Enable or Disable to indicate the state of the internal thermostat thermal sensor. The internal thermal sensor may be disabled if only remote sensing is desired. ■ Disable – The internal thermal sensor is disabled. No Local Sensor value is displayed on the Status and Control Page (page 3-9). ■ Enable (default) – The internal thermal sensor is enabled.
Sensor Averaging	Select Enable or Disable to indicate if the thermostat internal thermal sensor should participate in the algebraic averaging of either or both of the Remote Sensors if the Local Sensor is enabled. (See Zone Temperature (page 3-10).) ■ Enable (default) – The internal thermal sensor participates in the algebraic averaging. The Zone Temperature now reflects the average temperature of the averaged measurements. ■ Disable – The thermostat internal sensor is excluded from the thermal averaging calculations.
Sensor Correction	Selects a value to adjust the sensor for calibration. -5 °F (-2.8 °C) through +5 °F (2.8 °C) The default is 0.
Remote Sensor 1 and 2	
Name	Displays the Name (15 characters) for the external thermal sensor #1/#2. RS 1 / RS 2 The default is none.
State	Select Enable or Disable to indicate if the external thermal sensor #1 is installed on the thermostat. ■ Disable (default) – A remote external thermal sensor is not connected to the thermostat. No Remote Sensor #1 or #2 value is displayed on the Status and Control Page (page 3-9). ■ Enable – A remote external thermal sensor is connected to the thermostat.
Sensor Type	Select the remote sensor type, either thermistor or analog so that the appropriate temperature translation table is used to calculate the temperature value. (Consult the Proliphix web site for a list of sensors available in either type.) ■ Thermistor (default) – Thermistor-based thermal sensors. ■ Analog – Analog-based thermal sensors.

Table 3-7 Sensor Settings Field Descriptions (Continued)

Field	Description
Sensor Averaging	Select Enable or Disable to indicate if this remote thermal sensor is to participate in the algebraic averaging of either or both of the thermostat (local) sensor or the remaining Remote Sensor. This parameter is visible only if the Remote Sensor #1/#2 State is enabled. (See Zone Temperature (page 3-10).) ■ Disable (default) – Algebraic thermal averaging is disabled. ■ Enable – Remote Sensor #1/#2 is included in the thermal averaging calculations. The Zone temperature now reflects the average temperature of the averaged measurements.
Sensor Correction	Indicate the calibration or temperature offset compensation for this remote thermal sensor. Offset adjustments are added or subtracted from the actual temperature read from this sensor and displayed as the apparent temperature. This apparent temperature is available for averaging with the other sensors if Sensor Averaging is selected. -5 °F (-2.8 °C) through +5 °F (2.8 °C) – Offset temperature in degrees Fahrenheit or Celsius increments. The default is 0.

Remote Access Page

From the **Remote Access Page**, you can configure parameters necessary to invoke and control the intercommunication of the thermostat with a remote server (e.g. Proliphix Web Site) for remote access. Note that when this service is enabled (i.e. Remote Access is enabled, see below) all alarm notifications are sent to the Proliphix Web Server IP address for processing and subsequent transmission as an e-mail.

Remote Server Configuration

You can access the Professional Series thermostat remotely from anywhere in the world using a web browser. By default, Proliphix thermostats intercommunicate with the Proliphix Web Server to provide this capability. If the Proliphix Web Server is not used, a private server may be used but it must provide both alarm notification processing and e-mail generation to fully emulate the remote-access capability which Proliphix provides. Certain parameters must be configured in this section to facilitate the remote access feature.

Figure 3-17 Remote Access Page

Thermostat Main Lobby - Remote Access Settings - Microsoft Internet Explorer

Address: <http://198.168.1.50:8081/adv2.shtml>

NT150e

Remote Access Settings **Main Lobby**

Alarm Notification

Remote Access: Enabled

Remote Server Configuration

Server Address	207.58.145.109	207.58.145.109
Server Port	80	80
Interval	1 hours	1 hr(s)
Last Attempt	Sunday, April 15, 2007 6:34:02 PM Success	Discover Now
Last Success	Sunday, April 15, 2007 6:34:02 PM	

Customer Information

ID ¹	1F7E-888D	1F7E-888D
	Refresh	Submit

¹Your customer ID is obtained by registering at www.proliphix.com. The format of the ID is NNNN-NNNN

Alarm Notification

Use [Table 3-8](#) to complete the **Remote Access** page fields.

Table 3-8 Remote Access Page Field Descriptions

Field	Description
Alarm Notification	
Remote Access	Controls whether the Remote Server service is enabled. Remote access is the term used to describe the management and control of the thermostat from networks outside the local subnet on which the thermostat resides. Remote access provides the thermostat with the ability to be controlled from either across the Internet (with the Proliphix Web Server) or across multiple corporate subnets to a private enterprise server. ■ Disable (default) – Remote Server function is disabled. ■ Enable – The thermostat is enabled to participate with a Remote Server, either the Proliphix Remote Management Server (See the <i>Proliphix Installer Remote Management Guide</i>) or a private server, to provide remote access capability.
Remote Server Configuration	
Server Address	The IP address of the Remote Server, either the Proliphix Remote Management Server or a private server which supports remote access. <i>This field is pre-configured at the factory with the IP address of the Proliphix Web Server.</i> 207.58.145.109 – (default) Four field standard dot notation for IP address designation.
Server Port	The outgoing IP port number which is used to communicate to the remote server. <i>This field is pre-configured at the factory with the IP port number of the Proliphix Web Server.</i> 80 – (default) Port number of the remote server.
Interval	The time interval after which the thermostat intercommunicates with the remote server to self identify itself as an active and reachable thermostat. This interval is repeated continually as long as Remote Access is enabled. 1 - 24 hrs – Default interval is 1 hour.

Table 3-8 Remote Access Page Field Descriptions (Continued)

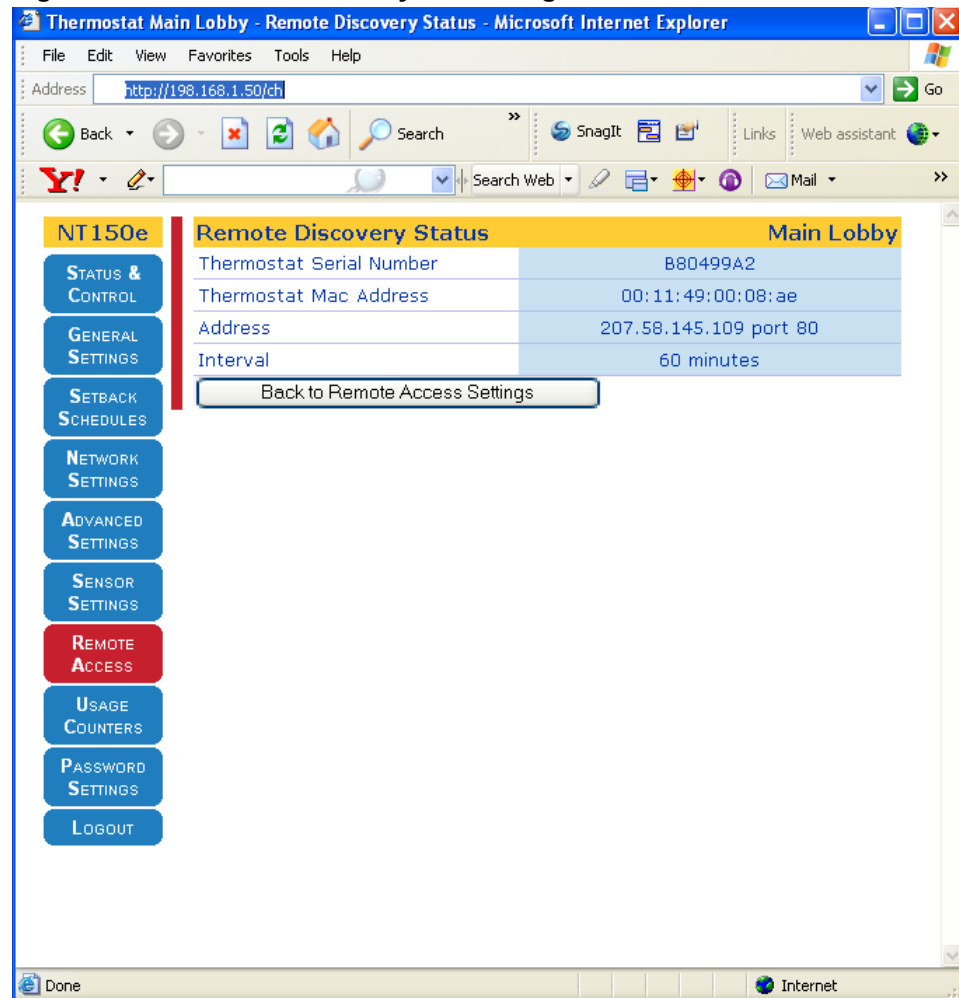
Field	Description
Last Attempt	The status of the last attempted intercommunication between the thermostat and the remote server. If there is a good communication connection between the thermostat and the remote server, the server deems that the thermostat is “reachable” and accessible by a user through the Internet or across the corporate network. Clicking Discover Now – Forces the intercommunication between the thermostat and the remote server. ■ mm.dd.yyyy – Date of last attempt to access the remote server. Default status is No Attempt. ■ hh.mm.ss – Time since last attempt to access the remote server. Default status is No Attempt. ■ Success/Fail – Status of last attempt to initiate the communication to the remote server.
Last Success	The status of the last intercommunication between the thermostat and the remote server. If there is a good communication connection between the thermostat and the remote server, the server deems that the thermostat is reachable and accessible by a user through the Internet. ■ mm.dd.yyyy – Date of last successful communication with the remote server. Default status is No Attempt. ■ hh.mm.ss – Time since last successful communication with the remote server. Default status is None.
Customer Information	
Customer ID	Enter a unique customer identifier assigned by Proliphix after you register your thermostat at www.proliphix.com. Registration is required prior to obtaining this ID to ensure that only authorized Proliphix customers may participate in remotely managing their thermostats. The field is required only if you want to use the Proliphix Web Server as the remote server for remotely accessing their thermostat. See <i>Proliphix Installer Remote Management Guide</i>. Eight digit, alpha-numeric identifier assigned by Proliphix in the form of 78F3-AC62.

Remote Discovery Status Page

After you click **Discover Now** (and the **Remote Discovery State** is enabled) on the [Remote Access Page](#) (page 3-49), the [Remote Discovery Status Page](#) (page 3-52) appears. This page displays a brief synopsis of the state of the thermostat and initiates the discovery process with the remote web server (e.g. Proliphix web server on the Proliphix Web Site).

Click **Back to Remote Access Settings** to return to the [Remote Access Page](#) (page 3-49) and view a completion status of the discovery process in the **Last Attempt** field.

Figure 3-18 Remote Discovery Status Page



Installer Info Page

The **Installer Information Page** is included within the administrator pages specific to those responsible for the installation and management of the thermostat. This page contains contact information for the installer.

Figure 3-19 Installer Info(rmation) Page

Thermostat Main Lobby - Installer Info - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address Go

Back Forward Stop Reload Home Search

Y! Search Web

NT150e **Installer Info** **Main Lobby**

STATUS & CONTROL

GENERAL SETTINGS

SETBACK SCHEDULES

NETWORK SETTINGS

ADVANCED SETTINGS

SENSOR SETTINGS

REMOTE ACCESS

INSTALLER INFO

USAGE COUNTERS

PASSWORD SETTINGS

LOGOUT

Installer Contact Information

Name

Address #1

Address #2

City

State / Province

Postal Code

Phone

Email

Internet

Usage Counters Page

Usage counters, for example: **Heat1**, **Aux Heat**, **Cool1**, **Fan**, and the **External Relay** (NT150e/h and NT160e/h only) provide a minute-accurate duration activity for all relays.



Note

The usage counters that are displayed depend on how your thermostat is configured.

Each counter directly accumulates the number of minutes each relay has been active. Only the Admin(istrator) account can reset the current value for each of the counters to zero. To reset the **Fan Usage** counter, click the **Filter Replaced** check box on the [General Settings Page](#) (page 3-14).

Figure 3-20 Usage Counters Page

The screenshot shows the 'Usage Counters' page for a thermostat. The browser window title is 'Thermostat Main Lobby - Usage Counters - Microsoft Internet Explorer'. The address bar shows 'http://198.168.1.50:8081/usage.shtml'. The page has a sidebar with navigation links: STATUS & CONTROL, GENERAL SETTINGS, SETBACK SCHEDULES, NETWORK SETTINGS, ADVANCED SETTINGS, SENSOR SETTINGS, REMOTE ACCESS, INSTALLER INFO, **USAGE COUNTERS**, PASSWORD SETTINGS, and LOGOUT. The main content area is titled 'Usage Counters' and 'Main Lobby'. It contains two tables of 'On Time Minutes'.

On Time Minutes			
Heat1	Heat2	Cool1	Cool2
130487	109595	0	0

On Time Minutes	
Fan ¹	External Relay
1212	25100

Counter Status and Control

Include Heat Usage in Fan Usage	Yes	Yes ▾
Last Counter Reset	Friday, April 13, 2007 11:32:44 AM	No Action ▾
Refresh		Submit

¹The fan usage counter set to 0 when the *Filter Replaced* checkbox is selected on the *General Settings* page

Use [Table 3-9](#) to complete the **Usage Counter** page fields.

Table 3-9 Usage Counters Page Field Descriptions

Field	Description
Relay Counters	
Heat1	Displays the first stage Heat1 relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field.
Heat2	Displays the first stage Heat2 relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field.
Aux Heat	Displays the first stage Aux Heat relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field. <i>Note: This field is available in heat pump mode only.</i>
Cool1	Displays the first stage Cool1 relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field.
Cool2	Displays the second stage Cool2 relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field.
Fan	Displays the Fan relay minute activity counter. Can be reset only by resetting the Filter Reminder Alarm setting on the General Settings Page (page 3-14).
External Relay (NT150e/h and NT160e/h only)	Displays the External Relay minute activity counter. The Admin account user can reset this field by setting Reset Counters in the Last Counter Reset field. (See Advanced Configuration settings on the Advanced Settings Page (page 3-35).)
Counter Status and Control	
Include Heat Usage in Fan Usage	Displays whether to include heating cycle run time in systems where the fan is used to deliver heat, for example, forced hot air systems. ■ Yes to include heating cycle run time. ■ No to not include heating cycle run time.
Last Counter Reset	Displays the date and time of the last manual reset of the Relay Counters. ■ No Action (default) ■ Reset Counters – When selected, returns the counters to zero value (except fan) after clicking Submit. – mm.dd.yyyy – Date of the last manual reset of the Relay Counters. – hh.mm.ss – Time since last the last manual reset of the Relay Counters.

Password Settings Page

You can access additional installer-specific pages after successfully logging in as an administrator. As a user, you may change your password. As an administrator, you may also change the administrator and/or user passwords.

Figure 3-21 Admin Password Settings Page

The screenshot shows a web browser window titled "Thermostat Main Lobby - Admin Settings - Microsoft Internet Explorer". The address bar displays "http://198.168.1.50:8081/admin.shtml". The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a toolbar with navigation buttons (Back, Forward, Stop, Reload, Home, Search), and a search bar. The main content area is divided into a left sidebar and a main panel. The sidebar, labeled "NT150e", contains a vertical list of buttons: STATUS & CONTROL, GENERAL SETTINGS, SETBACK SCHEDULES, NETWORK SETTINGS, ADVANCED SETTINGS, SENSOR SETTINGS, REMOTE ACCESS, INSTALLER INFO, USAGE COUNTERS, PASSWORD SETTINGS (highlighted in red), and LOGOUT. The main panel has a yellow header "Password Settings" with a "Main Lobby" link. Below the header, there are two sections: "Admin Password" and "User Password". Each section contains two input fields for "New password" and "Confirm password". At the bottom of the main panel, there are "Refresh" and "Submit" buttons. The browser's status bar at the bottom shows "Done" and "Internet".

Use [Table 3-10](#) to complete the **Password Settings** page fields.

Table 3-10 Admin Password Settings Field Descriptions

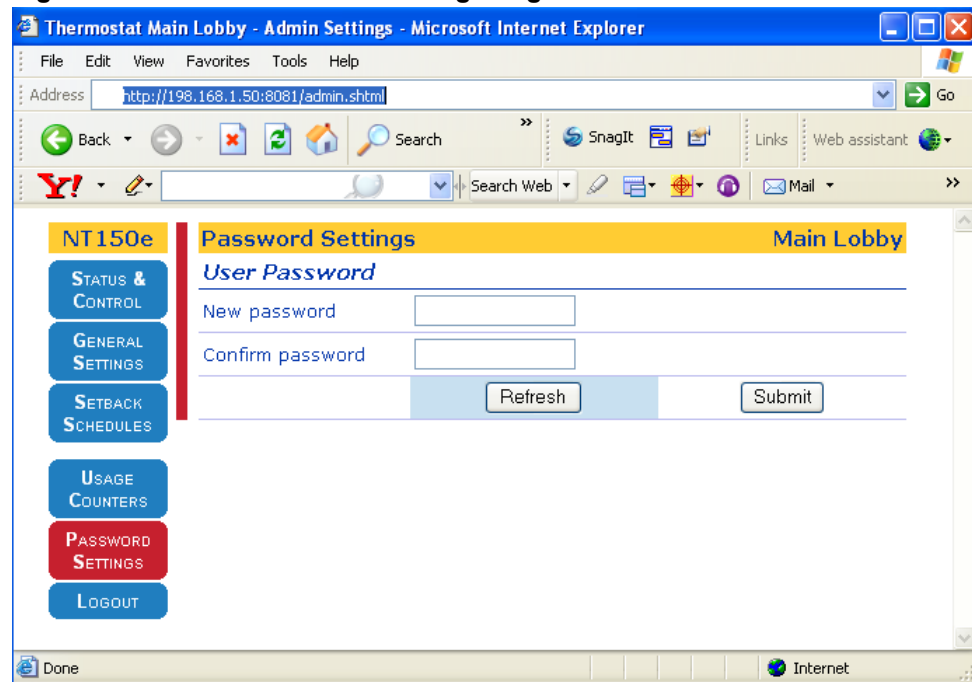
Field	Description
Admin Password	
New Password	Enter an alpha-numeric password for the Administrator (admin) account. The password is case sensitive and limited to 15 alpha-numeric characters. The default password is admin .
Confirm Password	Re-enter your password (from the New Password field).
User Password	
New Password	Enter an alpha-numeric password for the User account. The password is case sensitive and limited to 15 alpha-numeric characters. The default password is admin .
Confirm Password	Re-enter your password (from the New Password field).

The **Administrator** can access all installer-specific pages. The **User** account is limited to viewing and controlling the following pages:

- [Status & Control Page \(page 3-9\)](#)
- [General Settings Page \(page 3-14\)](#)
- [Setback Schedules Page \(page 3-19\)](#)

The **User** account can also change the user password as shown in [Figure 3-22](#).

Figure 3-22 User Password Settings Page



Use [Table 3-11](#) to complete the **Admin Settings (User Password)** page fields.

Table 3-11 Admin Settings (User Password) Field Descriptions

Field	Description
User Password	
New Password	Enter an alpha-numeric password for the User account. The password is case sensitive and limited to 15 alpha-numeric characters. The default password is admin .
Confirm Password	Re-enter your password (from the New Password field).

Troubleshooting

This chapter describes how to reset the Proliphix thermostat.

Resetting the Thermostat

Although it is highly unlikely that the thermostats are unable to perform correctly against unsolicited and unwanted network activity, occasionally a reset may be necessary to bring the thermostat back into proper operation.



Caution

Do not perform a software reset or factory reset on the thermostat until instructed to do so by a qualified Proliphix customer support representative. See [Technical Support](#) on [page xv](#).

Software Reset

A software reset reboots the network processor and retains the programming and thermostat setback schedules.

To perform a software reset at the thermostat:

- 1 From the [Status & Control Screen](#) (page 2-10), select [Thermostat Control Screen](#) (page 2-11).
- 2 Press and hold **Reset** for longer than 3 seconds (see [Figure 2-9 on page 2-11](#)).

Factory Reset

A factory reset clears the thermostat's internal memory and returns the thermostat to the factory-default state.



Caution

Performing a factory reset clears the setback scheduling and other programmed parameters. These settings can not be recovered after a reset. In addition, the IP addressing mode reverts back to DHCP, the current IP address is lost, and the thermostat becomes unreachable (until the thermostat retrieves a new address from the local DHCP server).

To perform a factory reset at the thermostat:

- 1 Remove the thermostat cover from the base which is attached to the wall. (See the *Proliphix Thermostat Installation Guide*.)
- 2 Attach the top of the cover to the top of the base as a hinge.
- 3 Press and hold the middle button of thermostat while closing the cover into the base. Do not release the button until the LCD characters appear.

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